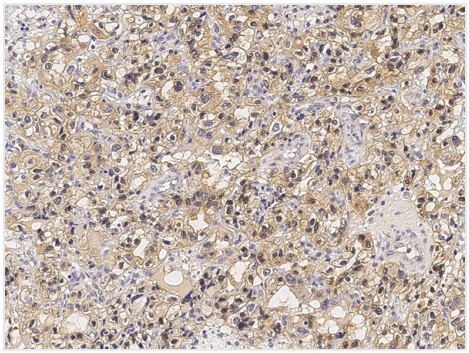
GAPDH Antibody – Rabbit Polyclonal

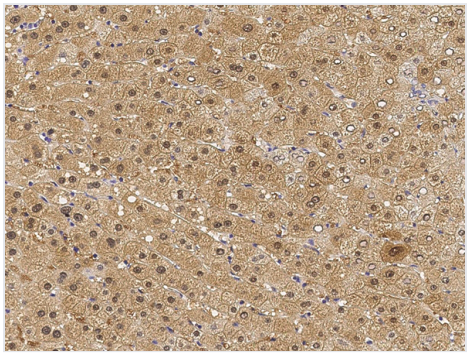
PRODUCT OVERVIEW

Product Name	GAPDH, Polyclonal Antibody
Full Product Name	Anti-GAPDH Antibody, Rabbit Polyclonal
Product Gene Name	anti-GAPDH antibody
Product Synonym Names	GAPDH Antibody, Rabbit PAb, Antigen Affinity Purified; glyceraldehyde-3-phosphate dehydrogenase; Anti-G3PD Antibody; Anti-GAPD Antibody; Anti-HEL-S-162eP Antibody
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	0.2um filtered solution in PBS
Purity/Purification	Protein A & Antigen Affinity
Specificity	Human GAPDH
Preparation and Storage	This antibody can be stored at 2-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.
Chromosome Location	Chromosome: 12; NC_000012.11 (6643585..6647537). Location: 12p13
OMIM	138400
3D Structure	ModBase 3D Structure for P04406
Immunogen	A synthetic peptide corresponding to the center region of the human GAPDH
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with A synthetic peptide corresponding to the center region of the human GAPDH, and purified by antigen affinity chromatography.
Product Categories/Family for anti-GAPDH antibody	Adaptor Proteins
Applications Tested/Suitable for anti-GAPDH antibody	Immunohistochemistry-Paraffin (IHC-P)
Application Notes for anti-GAPDH antibody	IHC-P: 1:1000-1:4000
Related Product Information for anti-GAPDH antibody	Glyceraldehyde 3-phosphate dehydrogenase (GAPDH or G3PDH) is an enzyme of about 37kDa that is consisdered as a cellular enzyme involved in glycolysis. It catelyzes the sixth step of glycolysis. Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is a pleiotropic enzyme that is overexpressed in apoptosis and in several human chronic pathologies. Its role as a mediator for cell death has also been highlighted. A recent report suggests that GAPDH may be genetically associated with late-onset of Alzheimer's disease. Besides, deprenyl, which has originally been used as a monoamine oxidase inhibitor for Parkinson's disease, binds to GAPDH and displays neuroprotective actions.

Product References and Citations for anti-GAPDH antibody	Hara MR, et al. (2006) Neuroprotection by pharmacologic blockade of the GAPDH death cascade. PNA. 103 (10): 3887-9.Hara MR, et al. (2006) GAPDH as a sensor of NO stress.Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease. 1762 (5): 502-9.Tarze A, et al. (2007) GAPDH, a novel regulator of the pro-apoptotic mitochondrial membrane permeabilizationGAPDH and apoptosis. Oncogene. 26: 2606-20.Yi MK, et al. (2000) Functional Significance of the Interaction of Hepatitis A Virus RNA with Glyceraldehyde 3-Phosphate Dehydrogenase (GAPDH): Opposing Effects of GAPDH and Polypyrimidine Tract Binding Protein on Internal Ribosome Entry Site Function. Journal of Virology. 74 (14) : 6459-68.
Other Notes	Small volumes of anti-GAPDH antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for GAPDH purchase	MBS8100178 is an antibody targeting GAPDH. Also known as Anti-GAPDH Antibody, Rabbit Polyclonal. Reactive in Human. Host: Rabbit.



Immunohistochemistry (IHC) of anti-GAPDH antibody
Immunochemical staining of human GAPDH in human renal carcinoma with rabbit polyclonal antibody (1:2000, formalin-fixed paraffin embedded sections).



Immunohistochemistry (IHC) of anti-GAPDH antibody
Immunochemical staining of human GAPDH in human hepatitis with rabbit polyclonal antibody (1:2000, formalin-fixed paraffin embedded sections).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GAPDH. It may not necessarily be applicable to this product.

NCBI GI #	378404908
NCBI GeneID	2597
NCBI Accession #	NP_001243728.1
UniProt Primary Accession #	P04406
UniProt Secondary Accession #	P00354; Q53X65
UniProt Related Accession #	P04406
GenBank Nucleotide #	NM_001256799.1
NCBI Official Full Name	glyceraldehyde-3-phosphate dehydrogenase isoform 2
NCBI Official Synonym Full Names	glyceraldehyde-3-phosphate dehydrogenase
NCBI Official Symbol	GAPDH
NCBI Official Synonym Symbols	G3PD; GAPD
UniProt Protein Name	Glyceraldehyde-3-phosphate dehydrogenase
UniProt Synonym Protein Names	Peptidyl-cysteine S-nitrosylase GAPDH
Protein Family	Glyceraldehyde-3-phosphate dehydrogenase
UniProt Gene Name	GAPDH
UniProt Synonym Gene Names	GAPD; GAPDH
UniProt Entry Name	G3P_HUMAN

NCBI Protein Information	glyceraldehyde-3-phosphate dehydrogenase; aging-associated gene 9 protein; peptidyl-cysteine S-nitrosylase GAPDH
NCBI Summary for GAPDH	The product of this gene 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 exists as a tetramer of identical chains. Many pseudogenes similar to this locus are present in the human genome. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2012]
UniProt Comments for GAPDH	GAPDH: a multifunctional enzyme with both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities. A key glycolytic enzyme that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. An important enzyme for energy metabolism, and the production of ATP and pyruvate through anaerobic glycolysis in the cytoplasm. Additionally, it participates in apoptosis, membrane trafficking, iron metabolism, nuclear activities and receptor mediated cell signaling. Its subcellular localization changes reflecting its multiple activities. Is cytosolic, but is also localized in the membrane, the nucleus, polysomes, the ER and the Golgi. Participates in transcription, RNA transport, DNA replication and apoptosis. S-nitrosylation on Cys-152 following apoptotic stimulates its interaction with SIAH2, which in turn moderates its translocation into the nucleus. Mediates cysteine S-nitrosylation of nuclear target proteins including SIRT1, HDAC2 and DNA-PK. Deregulated in lung cancer, renal cancer, breast cancer, gastric cancer, glioma, liver cancer, colorectal cancer, melanoma, prostatic cancer, pancreatic cancer and bladder cancer. Its increased expression and enzymatic activity is associated with cell proliferation and tumorigenesis, Oxidative stress impairs GAPDH catalytic activity and leads to cellular aging and apoptosis. In experimental animal models, injection of GAPDH antagonists induces apoptosis and blocks Hep3B tumor progression, suggesting a therapeutic potential of targeting GAPDH in human hepatocellular carcinoma Protein type: Carbohydrate Metabolism - glycolysis and gluconeogenesis; Oxidoreductase; EC 1.2.1.12 Chromosomal Location of Human Ortholog: 12p13 Cellular Component: microtubule cytoskeleton; nuclear membrane; membrane; intracellular membrane-bound organelle; perinuclear region of cytoplasm; cytoplasm; plasma membrane; lipid particle; ribonucleoprotein complex; cytosol; nucleus; vesicle Molecular Function: identical protein binding; protein binding; microtubule binding; glyceraldehyde-3-phosphate dehydrogenase (phosphorylating) activity; NADP binding; NAD binding Biological Process: neuron apoptosis; glycolysis; protein stabilization; negative regulation of translation; carbohydrate metabolic process; glucose metabolic process; pathogenesis; microtubule cytoskeleton organization and biogenesis; gluconeogenesis
Research Articles on GAPDH	**1.** GAPDH negatively regulates HIV-1 infection and provide insights into a novel function of GAPDH in the HIV-1 life cycle and a new host defense mechanism against HIV-1 infection.
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