

Recombinant Human Glyceraldehyde-3-phosphate dehydrogenase

Cat. No. GAPDH-115H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant GAPDH protein was expressed in E.coli and purified by using conventional chromatography techniques, 36kDa (335aa).

Species

Human

Source

E.coli

Description

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is a catalytic enzyme commonly known to be involved in glycolysis. The enzyme exists as a tetramer composed of 36-kDa subunits and has various intracellular functions. GAPDH catalyzes the reversible reduction of 1,3-bisphosphoglycerate to glyceraldehyde 3-phosphophate in the presence of NADPH. Besides functioning as a glycolytic enzyme in cytoplasm, evidence suggests that mammalian GAPDH is also involved in a great number of intracellular processes such as membrane fusion, microtubule bundling, phosphotransferase activity, nuclear RNA export, DNA replication and DNA repair.

Sequences of amino acids

MGKVKVGVNG FGRIGRLVTR AAFNSGKVDI VAINDPFIDL NYMVYMFQYD
 STHGKFHGTV KAENGKLVIN GNPITIFQER DPSKIKWGDA GA EYVVESTG
 VFTTMEKAGA HLQGGAKRVI ISAPSADAPM FVMGVNHEKY DNSLKIISNA
 SCTTNCLAPL AKVIHDNFGI VEGLMTTVHA ITATQKTVDG PSGKLWRDGR
 GALQNIIPAS TGAAKAVGKV IPELNGKLTG MAFRVPTANV SVVDLTCRLE
 KPAKYDDIKK VVKQASEGPL KGILGYTEHQ VVSSDFNSDT HSSTFDAGAG

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IALNDHFKVL ISWYDNEFGY SNRVVDLMAH MASKE

Formulation

Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM DTT, 1 mM EDTA, 20% glycerol

Purity

> 95% by SDS - PAGE

Concentration

1 mg/ml (determined by Bradford assay)

Storage

Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name

[GAPDH](#) glyceraldehyde-3-phosphate dehydrogenase [Homo sapiens]

Synonyms

glyceraldehyde-3-phosphate dehydrogenase; G3PD; GAPD; MGC88685; GAPDH; glyceraldehyde-3-phosphate dehydrogenase; OTTHUMP00000174431; EC 1.2.1.12; OTTHUMP00000174432; aging-associated gene 9 protein; glyceraldehyde 3-phosphate dehydrogenase

Gene ID

[2597](#)

mRNA Refseq

[NM_002046](#)

Protein Refseq

[NP_002037](#)

MIM

[138400](#)

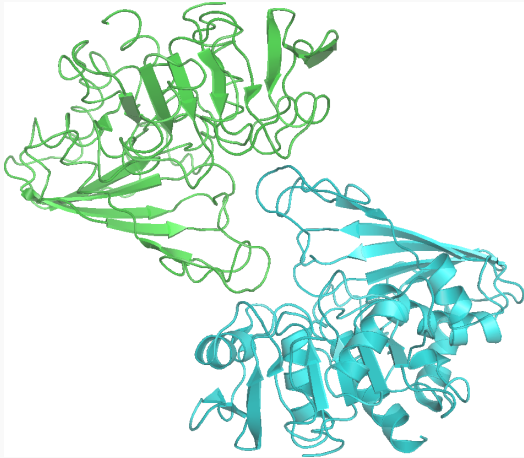
UniProt ID

[P04406](#)

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Chromosome Location	12p13
Pathway	Alzheimer"s disease; Dentatorubropallidoluysian atrophy (DRPLA); Glycolysis / Gluconeogenesis; Huntington"s disease; Neurodegenerative Disorders; Metabolism of carbohydrates
Function	NAD or NADH binding; glyceraldehyde-3-phosphate dehydrogenase (phosphorylating) activity; oxidoreductase activity; protein binding
PDBrendering based on 3GPD. Available structures:1j0x,1u8f,1zn	

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