

## Active Recombinant Human GAPDH protein (Bioactivity Validated)

Cat. No. GAPDH-20H Lot. No. (See product label)

### SPECIFICATION

#### Product Overview

Recombinant GAPDH protein was expressed in E.coli and purified by using conventional chromatography techniques.

#### 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.

#### Form

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

#### Bio-activity

Specific activity is > 90 units/mg, and is defined as the amount of enzyme that convert 1.0 umole of glyceraldehyde-3-phosphate to 1,3-Bisphosphoglycerate per minute at pH 8.5 at 37centigrade.

#### Molecular Mass

36kDa (335aa), confirmed by MALDI-TOF

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

**AA Sequence**

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

**Purity** > 95% by SDS - PAGE

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

**Concentration** 1 mg/ml (determined by Bradford assay)

## GENE INFORMATION

**Gene Name** [GAPDH glyceraldehyde-3-phosphate dehydrogenase \[ Homo sapiens \]](#)

**Official Symbol** [GAPDH](#)

**Synonyms** GAPDH; glyceraldehyde-3-phosphate dehydrogenase; GAPD; G3PD; MGC88685;

**Gene ID** [2597](#)

**mRNA Refseq** [NM\\_001256799](#)

**Protein Refseq** [NP\\_001243728](#)

**MIM** [138400](#)

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<b>UniProt ID</b>	P04406
<b>Chromosome Location</b>	12p13.31
<b>Pathway</b>	Alzheimers disease, organism-specific biosystem; Alzheimers disease, conserved biosystem; Androgen Receptor Signaling Pathway, organism-specific biosystem; Gluconeogenesis, organism-specific biosystem; Gluconeogenesis, oxaloacetate => fructose-6P, organism-specific biosystem; Gluconeogenesis, oxaloacetate =>
<b>Function</b>	NAD binding; NADP binding; glyceraldehyde-3-phosphate dehydrogenase (NAD+) (phosphorylating) activity; glyceraldehyde-3-phosphate dehydrogenase (NAD+) (phosphorylating) activity; oxidoreductase activity; peptidyl-cysteine S-nitrosylase activity; protein binding; transferase activity;
 <p>(kDa) 70 57 40 28 18 13.5 8.5</p> <p>15% SDS-PAGE (3ug)</p>	

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