

## GAPDH Protein, Human, Recombinant (His)

### General Information

Synonyms:	G3PD;GAPD;HEL-S-162eP;glyceraldehyde-3-phosphate dehydrogenase
Protein Construction:	A DNA sequence encoding the human GAPDH (P04406) (Met 1-Glu 335) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P04406
Molecular Weight:	38 kDa (predicted); 38 kDa (reducing conditions)

### QC Testing

Biological Activity:	Measured by its ability to catalyze D-glyceraldehyde 3-phosphate to 3-phosphoglycerate , the specific activity is >2500pmols/min/ug.
Purity:	> 93 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile 50 mM Tris, 30% glycerol, pH 7.5.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Glyceraldehyde 3-phosphate dehydrogenase (GAPDH or G3PDH) is an enzyme of about 37kDa that is considered as a cellular enzyme involved in glycolysis. It catalyzes 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.

### Reference

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Tarze A, et al. (2007) GAPDH, a novel regulator of the pro-apoptotic mitochondrial membrane permeabilization GAPDH 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.

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