

GAPDH Protein, Cricetus griseus, Recombinant (His)

General Information

Synonyms:	Peptidyl-cysteine S-nitrosylase GAPDH; Glyceraldehyde-3-phosphate dehydrogenase; GAPD; GAPDH
Protein Construction:	2-333 aa
Species:	Chinese hamster
Expression Host:	E. coli
Accession:	P17244
Molecular Weight:	39.7 kDa (predicted)
AA Sequence:	VKVGVNGFGRIGRLVTRAAFTSGKVEVVAINDPFIDLNYMVYMFQYDSTHGKFKGTVKAENGKLVINGKAITIF QERDPANIKWGDAGA EYVVESTGVFTTMEKAG AHLKGGAKRVIISAPSADAPMFVMGVNQDKYDNSLKIVS NASCTTNCLAPLAKVIHDNFGIVEGLMTTVHAIATQKTVDGPSGKLWRDGRGAAQNIIPASTGAAKAVGKVI PELNGKLTGMAFRVPTPNVSVVDLTCRLEKPAKYEDIKKVVKQASEGPLKILGYTEDQVVSDFNSDSHSST FDAGAGIALNDNFVKLISWYDNEFGYSNRVVDLMAYMASKE

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

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:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively. Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in

glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. Modulates the organization and assembly of the cytoskeleton. Facilitates the CHP1-dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules. Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation. Also plays a role in innate immunity by promoting TNF-induced NF-kappa-B activation and type I interferon production, via interaction with TRAF2 and TRAF3, respectively. Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC.

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