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Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



GAPDH (human, recombinant)

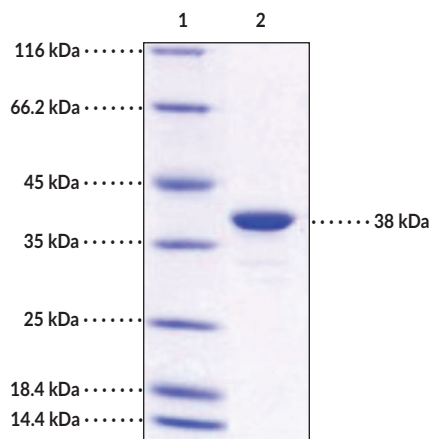
Item No. 31819

Overview and Properties

Synonyms: GAPD Protein, G3PD Protein, HEL-S-162eP, Peptidyl-cysteine S-nitrosylase
Source: Recombinant human N-terminal His-tagged GAPDH expressed in *E. coli*
Amino Acids: 1-335 (full length)
Uniprot No.: P04406
Molecular Weight: 38 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥90% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile 50 mM Tris, pH 7.5, with 30% glycerol
Protein Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: GAPDH

SDS-PAGE Analysis of GAPDH.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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PRODUCT INFORMATION



Description

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is an enzyme that catalyzes the conversion of glyceraldehyde-3-phosphate (Item No. 17865) to 1,3-bisphosphoglycerate during glycolysis and is involved in numerous additional cellular processes, including intracellular trafficking, receptor-mediated signaling, apoptosis, DNA repair, and the oxidative stress response.^{1,2} It exists as a tetramer and is composed of an N-terminal domain, which contains binding sites for NAD⁺, phosphatidylserine, RNA, and glutathione, and a C-terminal catalytic domain.³ GAPDH is widely expressed and primarily localizes to the cytosol, where it has roles in glycolysis and intracellular trafficking.^{1,4} It also localizes to the nucleus, mediating DNA integrity, gene transcription, and apoptosis, as well as to cellular membranes, where it has roles in membrane fusion and iron transport.⁴ GAPDH expression is increased by insulin, hypoxia-inducible factor-1 (HIF-1), p53, and nitric oxide (NO) and decreased by acetylated histones.^{1,5} Aberrant mRNA and protein levels of GAPDH have been found in tumor biopsies from patients with a variety of cancers, including lung, renal cell, colorectal, or breast cancer.⁶ Cayman's GAPDH (human, recombinant) protein consists of 346 amino acids and has a calculated molecular weight of 38 kDa.

References

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2. Sirover, M.A. On the functional diversity of glyceraldehyde-3-phosphate dehydrogenase: Biochemical mechanisms and regulatory control. *Biochim. Biophys. Acta* **1810(8)**, 741-751 (2011).
3. Sirover, M.A. Structural analysis of glyceraldehyde-3-phosphate dehydrogenase functional diversity. *Int. J. Biochem. Cell Biol.* **57**, 20-26 (2014).
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