

Glycerol-3-Phosphate Dehydrogenase 2 Recombinant Protein | GPD2 recombinant protein

Recombinant Human Glycerol-3-Phosphate Dehydrogenase 2

CATALOG #
AAA38707

HOST
E Coli

PRODUCT SYNONYMS

Glycerol-3-Phosphate Dehydrogenase 2; Recombinant Human Glycerol-3-Phosphate Dehydrogenase 2; GPD2 Human; Glycerol-3-Phosphate Dehydrogenase 2 Human Recombinant; Glycerol-3-phosphate dehydrogenase mitochondrial; glycerol-3-phosphate dehydrogenase 2 (mitochondrial); GPDH-M; GPD-M; mtGPD; GPD2; GDH2; GPDH; mGPDH; GPD2 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95.0% as determined by SDS-PAGE.
Form/Format	GPD2 protein solution (0.095mg/ml) is supplied in 20mM Tris-HCl pH 8, 1mM EDTA and 50% glycerol.
Concentration	0.095mg/ml (varies by lot)
Sequence Length	727
Preparation and Storage	Store at 4 degree C if entire vial will be used within 2-4 weeks. Store, frozen at -20 degree C for longer periods of time. Please avoid freeze thaw cycles.

ADDITIONAL INFORMATION

Related Product Information for GPD2 recombinant protein	Description: GPD2 Human Recombinant produced in E Coli is single, a non-glycosylated, Polypeptide chain containing 558 amino acids fragment (43-600) corresponding to the GlpA domain fragment of the mature protein, having a total molecular mass of 64kDa and fused with a 4.5kDa amino-terminal hexahistidine tag. The GPD2 is purified by proprietary chromatographic techniques. Introduction: GPD2 (Mitochondrial glycerol-3-phosphate dehydrogenase) is a Ca²⁺-sensitive, FAD-binding protein, which is located on the outer surface of the inner mitochondrial membrane. Two isoforms have been identified for mGPD: Isoform 1 is comprised of 727 a.a. residues, while isoform 2 lacks 126 a.a. residues of the N-terminus. GPD2 catalyses the oxidation of glycerol-3-phosphate to DHAP (dihydroxyacetone phosphate) with associated reduction of the enzyme-bound FAD. GPD2 is a testis-specific promoter of mitochondrial GPDH. GPD2 along with a cytosolic NAD-linked GPD forms the glycerol phosphate shuttle that uses the interconversion of G-3-P and DHAP to transfer reducing equivalents into mitochondria, which results in the reoxidation of NADH produced during glycolysis. GPD2 deficiency contributes to the impairment of glucose-stimulated insulin discharge in a number of animal models of non-insulin dependent diabetes mellitus. GPD2 up-regulation as a result of a highly glycolytic environment contributes to the general increase in ROS generation and may lead to the progression of prostate cancer.
Product Categories/Family for GPD2 recombinant protein	Enzymes; Dehydrogenase

NCBI AND UNIPROT INFORMATION

NCBI GI #	285002233
NCBI GeneID	2820
NCBI Accession #	NP_000399.3
NCBI GenBank Nucleotide #	NM_000408.4

UniProt Accession #	P43304 ; Q59FR1 ; Q9HAP9 ; A8K4V0 ; B3KSA9
Molecular Weight	67,531 Da
NCBI Official Full Name	glycerol-3-phosphate dehydrogenase, mitochondrial
NCBI Official Synonym Full Names	glycerol-3-phosphate dehydrogenase 2 (mitochondrial)
NCBI Official Symbol	GPD2
NCBI Official Synonym Symbols	GDH2; GPDM; mGPDH
NCBI Protein Information	glycerol-3-phosphate dehydrogenase, mitochondrial; GPD-M; GPDH-M; mitochondrial glycerophosphate dehydrogenase; mtGPD
UniProt Protein Name	Glycerol-3-phosphate dehydrogenase, mitochondrial
UniProt Gene Name	GPDM2
UniProt Synonym Gene Names	GPDM; GPDH-M
UniProt Entry Name	GPDM_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/gpd2-recombinant-protein-e-coli/38707>