Recombinant Human GFPT1/GFAT Protein

Catalog No. PKSH031281

Note: Centrifuge before opening to ensure complete recovery of vial contents.

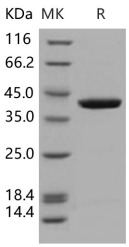
Description

Synonyms	CMSTA1;GFA;GFAT;GFAT1;GFAT1m;GFPT;GFPT1L;MSLG
Species	Human
Expression Host	E.coli
Sequence	Gln 332-Glu 699
Accession	AAA58502.1
Calculated Molecular Weight	41.5 kDa
Observed molecular weight	41.5 kDa
Tag	None
Bioactivity	Not validated for activity

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 97 % as determined by reducing SDS-PAGE.

Background

Glutamine:fructose-6-phosphate amidotransferase 1 (GFAT), also known as GFPT1, is a member of the N-terminal nucleophile aminotransferases and the first rate-limiting enzyme for the entry of glucose into the hexosamine biosynthesis

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pathway (HBP) in mammals. GFAT transfers the amino group from the L-glutamine amide to the D-fructose 6-phosphate, producing glutamic acid and glucosamine 6-phosphate. GFAT exists as a homotetramer in cytoplasm, and is proposed to be most likely involved in regulating the availability of precursors for N- and O-linked glycosylation of proteins. The full length of human GFAT contains 1 glutamine amidotransferase type-2 domain which catalyzes amide nitrogen transfer from glutamine to the appropriate substrate, and 2 SIS (Sugar Isomerase) domains found in many phosphosugar isomerases and phosphosugar binding proteins.Two isoforms of gfat have been identified: GFAT1 is predominantly expressed in skeletal muscle, whereas GFAT2 is expressed mainly in the central nervous system.

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