

Recombinant Human GFPT1 / GFAT Protein

Cat.NO.: TP06845

3th Edition

Synonyms:CMSTA1;GFA;GFAT;GFAT1;GFAT1m;GFPT;GFPT1L;MSLG

Description: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 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.

Form:PBS

Molecular Weight:41.5 kDa

Sequences:Gln 332-Glu 699

Purity:> 95% by HPLC

Concentration:

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage:Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.