Recombinant Protein Technical Manual

Recombinant Human GFPT1/GFAT Protein

RPES3946

Product Data:

Product SKU: RPES3946

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: AAA58502.1

Protein Information:

Molecular Mass: 41.5 kDa

AP Molecular Mass: 41.5 kDa

Tag:

Bio-activity:

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. 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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

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

Immunogen Information:

Sequence: Gln 332-Glu 699

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 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.