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Rabbit Anti-GFPT1/PE Conjugated antibody

SL13341R-PE

Product Name	Anti-GFPT1/PE
Chinese Name	PE 标记的谷氨酰胺 6-磷酸果糖转移酶抗体
Alias	D-fructose-6-phosphate amidotransferase 1; GFA; GFAT 1; GFAT; GFAT1; GFAT1m; GFPT; Gfpt1; GFPT1_HUMAN; Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1; Glutamine--fructose-6-phosphate transaminase 1; Glutamine:fructose 6 phosphate amidotransferase 1; Hexosephosphate aminotransferase 1.
Research Area	Cell biology Signal transduction Diabetes The new supersedes the old
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human(predicted:Mouse,Rat,Chicken,Dog,Pig,Horse,Rabbit,Sheep)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	79kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human GFPT1
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** Glutamine:fructose-6-phosphate amidotransferase (GFAT1) is the first and rate-limiting enzyme for the entry of glucose into the hexosamine biosynthesis pathway (HBP) in mammals. GFAT1, a member of the N-terminal nucleophile class of amidotransferases, converts fructose-6-phosphate into

N-acetylglucosamine-6-phosphate. Hyperglycemia-induced insulin resistance, a condition in which exposure to high concentrations of glucose and insulin results in insulin resistance, may result from increased glucose metabolism through the HBP. Hypergylcemia-induced insulin resistance is a characteristic feature of type 2 diabetes. Consequently, GFAT1 is a potential therapeutic target in the treatment of type 2 diabetes.

Function:
Controls the flux of glucose into the hexosamine pathway. Most likely involved in regulating the availability of precursors for N- and O-linked glycosylation of proteins.

Subunit:
Homotetramer

Tissue Specificity:
Isoform 1 is predominantly expressed in skeletal muscle. Not expressed in brain. Seems to be selectively expressed in striated muscle.

DISEASE:
Defects in GFPT1 are the cause of limb-girdle myasthenia with tubular aggregates (LGMTA) [MIM:610542]. A congenital myasthenic syndrome characterized by onset of proximal muscle weakness in the first decade. Individuals with this condition have a recognizable pattern of weakness of shoulder and pelvic girdle muscles, and sparing of ocular or facial muscles. EMG classically shows a decremental response to repeated nerve stimulation, a sign of neuromuscular junction dysfunction. Affected individuals show a favorable response to acetylcholinesterase (AChE) inhibitors.

Similarity:
Contains 1 glutamine amidotransferase type-2 domain.
Contains 2 SIS domains.

Database links:
UniProtKB/Swiss-Prot: Q06210.3

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.