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GFPT1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55140

Specification

GFPT1 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q06210
Reactivity	**Rat, Pig, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**79 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human GFPT1**
Epitope Specificity	**601-699/699**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SIMILARITY	**Contains 1 glutamine amidotransferase type-2 domain. Contains 2 SIS domains.**
SUBUNIT	**Homotetramer**
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.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
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.

GFPT1 Polyclonal Antibody - Additional Information

Gene ID 2673

Other Names
Glutamine--fructose-6-phosphate aminotransferase [isomerizing] 1, 2.6.1.16, D-fructose-6-phosphate amidotransferase 1, Glutamine:fructose-6-phosphate amidotransferase 1, GFAT 1, GFAT1, Hexosephosphate aminotransferase 1, GFPT1, GFAT, GFPT

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

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

GFPT1 Polyclonal Antibody - Protein Information

Name GFPT1

Synonyms GFAT, GFPT

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. Regulates the circadian expression of clock genes BMAL1 and CRY1 (By similarity). Has a role in fine tuning the metabolic fluctuations of cytosolic UDP-GlcNAc and its effects on hyaluronan synthesis that occur during tissue remodeling (PubMed:26887390).

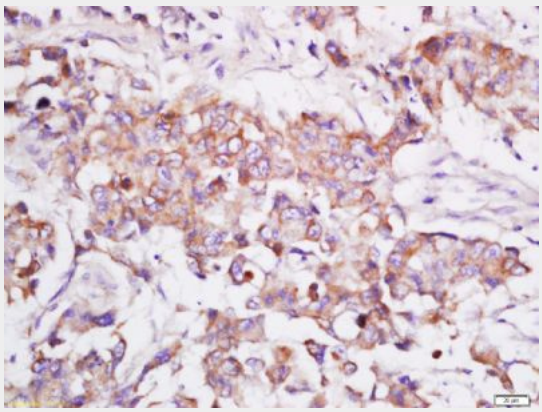
Tissue Location
Isoform 1 is predominantly expressed in skeletal muscle. Not expressed in brain. Seems to be selectively expressed in striated muscle.

GFPT1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GFPT1 Polyclonal Antibody - Images



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-GFPT1 Polyclonal Antibody, Unconjugated(bs-13341R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining