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GFPT1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2211a

Product Information

Application	WB, FC, ICC, E
Primary Accession	Q06210
Reactivity	Human, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	1F1A4
Isotype	IgG1
Calculated MW	78806
Description	This gene encodes the first and rate-limiting enzyme of the hexosamine pathway and controls the flux of glucose into the hexosamine pathway. The product of this gene catalyzes the formation of glucosamine 6-phosphate.
Immunogen	Purified recombinant fragment of human GFPT1 (AA: 536-681) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

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
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GFPT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GFPT1 (HGNC:4241)
Synonyms	GFAT, GFPT

Function	Rate-limiting enzyme of the hexosamine biosynthetic pathway (HBP) that catalyzes the formation of glucosamine-6-phosphate from fructose-6-phosphate and glutamine, thereby controlling the flux of glucose into this pathway (PubMed:32019926, PubMed:35229715). Inhibited by UDP-N-acetylglucosamine (UDP-GlcNAc) through a feedback loop (PubMed:32019926, PubMed:35229715). Fine-tunes the metabolic fluctuations of UDP-GlcNAc and its impacts on hyaluronan synthesis during tissue remodeling (PubMed:26887390). Via control of the HPB, regulates the availability of precursors for N- and O-linked protein glycosylation and modulates peripheral clock oscillation (By similarity).
Tissue Location	[Isoform 1]: Predominantly expressed in skeletal muscle. Not expressed in brain. Seems to be selectively expressed in striated muscle.

References

1.Neurology. 2013 Jul 23;81(4):370-8.2.Hum Mol Genet. 2013 Jul 15;22(14):2905-13.

Images

