

# GFPT1 Antibody

Purified Mouse Monoclonal Antibody  
Catalog # AO2212a

## Product Information

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<b>Application</b>	WB, FC, ICC, E
<b>Primary Accession</b>	<a href="#">Q06210</a>
<b>Reactivity</b>	Human, Rat, Monkey
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	1F1B9
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	78806
<b>Description</b>	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.
<b>Immunogen</b>	Purified recombinant fragment of human GFPT1 (AA: 536-681) expressed in E. Coli.
<b>Formulation</b>	Purified antibody in PBS with 0.05% sodium azide

## Additional Information

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<b>Gene ID</b>	2673
<b>Other Names</b>	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
<b>Dilution</b>	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
<b>Storage</b>	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.
<b>Precautions</b>	GFPT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	GFPT1 ( <a href="#">HGNC:4241</a> )
<b>Synonyms</b>	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

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

## Images

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