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GPI Rabbit pAb

Catalog # AP98735

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P06744
Other Accession	P06744
Reactivity	Rat, Human, Mouse
Predicted	Pig, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	63147
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Glucose 6 phosphate isomerase
Epitope Specificity	401-500/558
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the GPI family.
SUBUNIT	Homodimer in the catalytically active form, monomer in the secreted form.
Post-translational modifications	Phosphorylation at Ser-185 by CK2 has been shown to decrease enzymatic activity and may contribute to secretion by a non-classical secretory pathway. ISGylated.
DISEASE	Defects in GPI are the cause of hemolytic anemia non-spherocytic due to glucose phosphate isomerase deficiency (HA-GPID) [MIM:613470]. It is a form of anemia in which there is no abnormal hemoglobin or spherocytosis. It is caused by glucose phosphate isomerase deficiency. Severe GPI deficiency can be associated with hydrops fetalis, immediate neonatal death and neurological impairment.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene belongs to the GPI family whose members encode multifunctional phosphoglucose isomerase proteins involved in energy pathways. The protein encoded by this gene is a dimeric enzyme that catalyzes the reversible isomerization of glucose-6-phosphate and fructose-6-phosphate. The protein functions in different capacities inside and outside the cell. In the cytoplasm, the gene product is involved in glycolysis and gluconeogenesis, while outside the cell it functions as a neurotrophic factor for spinal and sensory neurons. Defects in this gene are the cause of nonspherocytic hemolytic anemia and a severe enzyme deficiency can be associated with hydrops fetalis, immediate neonatal death and neurological impairment. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	2821

Other Names	AMF; CNSHA4; GNPI; NLK; PGI; PHI; SA-36; SA36; Gpi; Gpi-1; Gpi-1r; Gpi-1s; Gpi-1t; Gpi1-r; Gpi1-s; Gpi1-t; Gpi1s; MF; NK; NK/GPI; Org; Gpi1; G6PI_HUMAN; Autocrine motility factor (AMF); Neuroleukin (NLK); Phosphoglucose isomerase (PGI); Phosphohexose isomerase (PHI); Sperm antigen 36 (SA-36); 5.3.1.9; G6PI_MOUSE; G6PI_RAT; glucose-6-phosphate isomerase; glucose phosphate isomerase
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C 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 °C.

Protein Information

Name	GPI {ECO:0000303|PubMed:2387591, ECO:0000312|HGNC:HGNC:4458}
Function	Isomerase that catalyzes the conversion of alpha-D-glucose-6- phosphate to beta-D-fructose-6-phosphate, the second step in glycolysis, and the reverse reaction in gluconeogenesis, within the cytoplasm (PubMed:28803808). Also shows C2-epimerase activity, interconverting D-glucose-6-phosphate (G6P) and D-mannose-6-phosphate (M6P) (By similarity). Also displays anomerase activity, interconverting alpha and beta-anomeric forms of G6P, D-fructose-6-phosphate and M6P (By similarity). In addition to its metabolic role, this enzyme functions extracellularly as a cytokine: acts as autocrine motility factor (AMF), a secreted angiogenic factor that enhances endothelial cell motility (PubMed:11437381). Functions as neuroleukin, a neurotrophic factor supporting the survival of spinal and sensory neurons (PubMed:11004567, PubMed:3352745). Released by lectin- stimulated T-cells to induce immunoglobulin secretion (PubMed:11004567, PubMed:3352745).
Cellular Location	Cytoplasm. Secreted

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