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PGAM5 Rabbit pAb

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Catalog # AP57001

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q96HS1
Reactivity	Mouse
Predicted	Rat, Human, Rabbit, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	32004
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PGAM5
Epitope Specificity	51-150/289
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Mitochondrion. Mitochondrion outer membrane. Membrane. Isoform 2 overexpression results in the formation of disconnected punctuate mitochondria distributed throughout the cytoplasm. Isoform 1 overexpression results in the clustering of mitochondria around the nucleus.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Members of the PGAM (phosphoglycerate mutase) family of proteins are important components of glucose and 2,3-BPGA (2,3-bisphosphoglycerate) metabolism. They are responsible for catalyzing the transfer of phospho groups between the carbon atoms of phosphoglycerates. PGAM5 (phosphoglycerate mutase family member 5), also known as Bcl-xL-binding protein v68, is a 289 amino acid protein belonging to the BPG-dependent PGAM subfamily. PGAM5 exists as two isoforms produced by alternative splicing events, with isoform two localized to the cytoplasm and isoform one localized to both the cytoplasm and the nucleus. PGAM5 forms a dimer and has been found to interact with Bcl-xS/L and Keap1.

Additional Information

Gene ID	192111
Other Names	Serine/threonine-protein phosphatase PGAM5, mitochondrial, 3.1.3.16, Bcl-XL-binding protein v68, Phosphoglycerate mutase family member 5, PGAM5
Dilution	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 PGAM5

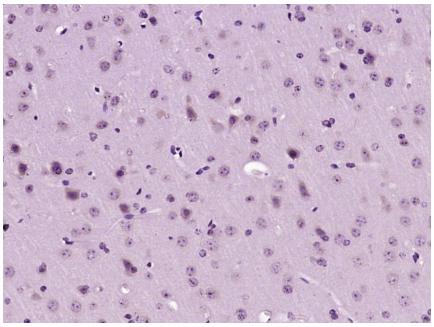
Function Mitochondrial serine/threonine phosphatase that dephosphorylates various substrates and thus plays a role in different biological processes including cellular senescence or mitophagy (PubMed:24746696, PubMed:32439975). Modulates cellular senescence by regulating mitochondrial dynamics. Mechanistically, participates in mitochondrial fission through dephosphorylating DNM1L/DRP1 (PubMed:32439975). Additionally, dephosphorylates MFN2 in a stress- sensitive manner and consequently protects it from ubiquitination and degradation to promote mitochondrial network formation (PubMed:37498743). Regulates mitophagy independent of PARKIN by interacting with and dephosphorylating FUNDC1, which interacts with LC3 (PubMed:24746696). Regulates anti-oxidative response by forming a tertiary complex with KEAP1 and NRF2 (PubMed:18387606). Regulates necroptosis by acting as a RIPK3 target and recruiting the RIPK1-RIPK3- MLKL necrosis 'attack' complex to mitochondria (PubMed:22265414).

Cellular Location Mitochondrion outer membrane; Single-pass membrane protein. Mitochondrion inner membrane; Single-pass membrane protein. Note=Isoform 2 overexpression results in the formation of disconnected punctuate mitochondria distributed throughout the cytoplasm. Isoform 1 overexpression results in the clustering of mitochondria around the nucleus

Background

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Images



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PGAM5) Polyclonal Antibody, Unconjugated (AP57001) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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