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PAK5 Rabbit pAb

Catalog # AP99966

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9P286
Other Accession	Q9P286
Reactivity	Rat
Predicted	Human, Mouse, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80745
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PAK5
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 protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily. Contains 1 CRIB domain. Contains 1 protein kinase domain.
SUBUNIT	Interacts tightly with GTP-bound but not GDP-bound CDC42/p21 and RAC1. Interacts with MARK2, leading to inhibit MARK2 independently of kinase activity. Interacts with RHOD and RHOH.
Post-translational modifications	Autophosphorylated when activated by CDC42/p21.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a member of the PAK family of Ser/Thr protein kinases. PAK family members are known to be effectors of Rac/Cdc42 GTPases, which have been implicated in the regulation of cytoskeletal dynamics, proliferation, and cell survival signaling. This kinase contains a CDC42/Rac1 interactive binding (CRIB) motif, and has been shown to bind CDC42 in the presence of GTP. This kinase is predominantly expressed in brain. It is capable of promoting neurite outgrowth, and thus may play a role in neurite development. This kinase is associated with microtubule networks and induces microtubule stabilization. The subcellular localization of this kinase is tightly regulated during cell cycle progression. Alternatively spliced transcript variants encoding the same protein have been described. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	57144
Other Names	PAK7; 2900083L08Rik; PAK-5; PAK-7; PAK5_HUMAN; PAK5; p21-activated kinase 5 (PAK-5); p21-activated kinase 7 (PAK-7); 2.7.11.1; KIAA1264; PAK5_MOUSE; PAK5_RAT; p21 (RAC1) activated kinase 5; p21(CDKN1A)-activated kinase 7; p21 protein (Cdc42/Rac)-activated kinase 7;

	p21 (RAC1) activated kinase 7
Dilution	IHC-P=1:400-800,IHC-F=1:400-800,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	PAK5 (HGNC:15916)
Synonyms	KIAA1264, PAK7
Function	Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell migration, proliferation or cell survival. Activation by various effectors including growth factor receptors or active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues. Phosphorylates the proto-oncogene RAF1 and stimulates its kinase activity. Promotes cell survival by phosphorylating the BCL2 antagonist of cell death BAD. Phosphorylates CTNND1, probably to regulate cytoskeletal organization and cell morphology. Keeps microtubules stable through MARK2 inhibition and destabilizes the F-actin network leading to the disappearance of stress fibers and focal adhesions.
Cellular Location	Mitochondrion. Cytoplasm. Nucleus. Note=Shuttles between the nucleus and the mitochondria, and mitochondrial localization is essential for the role in cell survival
Tissue Location	Predominantly expressed in brain.

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