

Recombinant Human PAK2 Protein (Glu177-Ala419), His tagged

Cat. No. PAK2-4796H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PAK2 (Glu177-Ala419) fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Glu177-Ala419
Description	Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell motility, cell cycle progression, apoptosis or proliferation. Acts as downstream effector of the small GTPases CDC42 and RAC1. Activation by the binding of active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues. Full-length PAK2 stimulates cell survival and cell growth. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Phosphorylates JUN and plays an important role in EGF-induced cell proliferation. Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP. Additionally, associates with ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation control during mitosis. On the other hand, apoptotic stimuli such as DNA damage lead to caspase-mediated cleavage of PAK2, generating PAK-2p34, an

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active p34 fragment that translocates to the nucleus and promotes cellular apoptosis involving the JNK signaling pathway. Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation.

Form	Lyophilized powder/frozen liquid
Molecular Mass	27.02 kDa
Purity	>90% as determined by SDS-PAGE.
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS, pH 7.5 or lyophilized from PBS, pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	PAK2 p21 protein (Cdc42/Rac) -activated kinase 2 [Homo sapiens (human)]
Official Symbol	PAK2
Synonyms	PAK2; p21 protein (Cdc42/Rac) -activated kinase 2; p21 (CDKN1A) activated kinase 2; serine/threonine-protein kinase PAK 2; PAK65; PAKgamma; S6/H4 kinase; p58; PAK-2; gamma-PAK; p21-activated kinase 2; p21 (CDKN1A) -activated kinase 2;

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Gene ID	5062
mRNA Refseq	NM_002577
Protein Refseq	NP_002568
MIM	605022
UniProt ID	Q13177

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