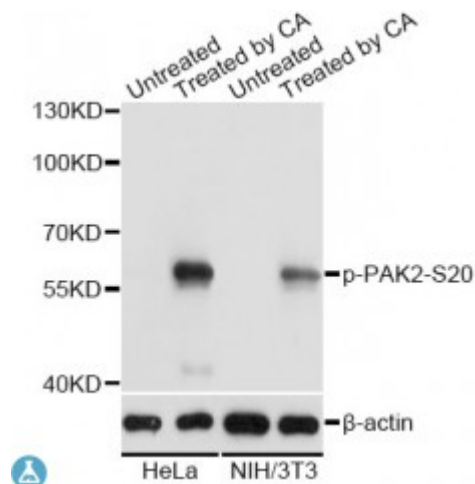


Anti-Phospho-PAK2-(S20) Antibody



Description

The p21 activated kinases (PAK) are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. The PAK proteins are a family of serine/threonine kinases that serve as targets for the small GTP binding proteins, CDC42 and RAC1, and have been implicated in a wide range of biological activities. The protein encoded by this gene is activated by proteolytic cleavage during caspase-mediated apoptosis, and may play a role in regulating the apoptotic events in the dying cell.

Model	STJ117901
Host	Rabbit
Reactivity	Human, Mouse
Applications	WB
Immunogen	A synthetic phosphorylated peptide around S20 of human PAK2 (NP_002568.2).
Gene ID	5062
Gene Symbol	PAK2
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Ubiquitously expressed, Higher levels seen in skeletal muscle, ovary, thymus and spleen
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Serine/threonine-protein kinase PAK 2]

Molecular Weight	58.043 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:8591OMIM:605022Reactome:R-HSA-164944
Alternative Names	Serine/threonine-protein kinase PAK 2]
Function	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 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,
Cellular Localization	Serine/threonine-protein kinase PAK 2: Cytoplasm, Lipid-anchor,
Post-translational Modifications	Full-length PAK2 is autophosphorylated when activated by CDC42/p21, Following cleavage, both peptides, PAK-2p27 and PAK-2p34, become highly autophosphorylated, with PAK-2p27 being phosphorylated on serine and PAK-2p34 on threonine residues, respectively, Autophosphorylation of PAK-2p27 can occur in the absence of any effectors and is dependent on phosphorylation of Thr-402, because PAK-2p27 is acting as an exogenous substrate