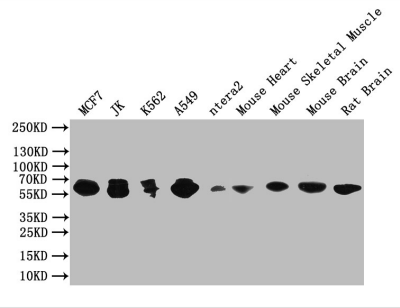
PAK1 Recombinant Monoclonal Antibody

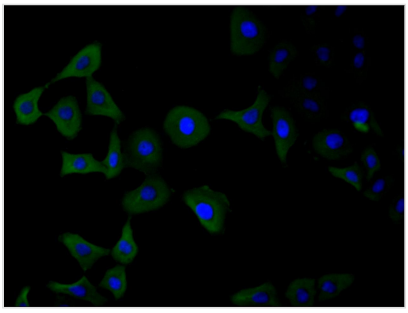
Product Code	CSB-RA287160A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q13153
Immunogen	A synthesized peptide derived from human PAK1
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, IF; Recommended dilution: WB:1:500-1:5000, IF:1:20-1:200
Relevance	Protein kinase involved in intracellular signaling pathways downstream of integrins and receptor-type kinases that plays an important role in cytoskeleton dynamics, in cell adhesion, migration, proliferation, apoptosis, mitosis, and in vesicle-mediated transport processes. Can directly phosphorylate BAD and protects cells against apoptosis. Activated by interaction with CDC42 and RAC1. Functions as GTPase effector that links the Rho-related GTPases CDC42 and RAC1 to the JNK MAP kinase pathway. Phosphorylates and activates MAP2K1, and thereby mediates activation of downstream MAP kinases. Involved in the reorganization of the actin cytoskeleton, actin stress fibers and of focal adhesion complexes. Phosphorylates the tubulin chaperone TBCB and thereby plays a role in the regulation of microtubule biogenesis and organization of the tubulin cytoskeleton. Plays a role in the regulation of insulin secretion in response to elevated glucose levels. Part of a ternary complex that contains PAK1, DVL1 and MUSK that is important for MUSK-dependent regulation of AChR clustering during the formation of the neuromuscular junction (NMJ). Activity is inhibited in cells undergoing apoptosis, potentially due to binding of CDC2L1 and CDC2L2. Phosphorylates MYL9/MLC2. Phosphorylates RAF1 at 'Ser-338' and 'Ser-339' resulting in: activation of RAF1, stimulation of RAF1 translocation to mitochondria, phosphorylation of BAD by RAF1, and RAF1 binding to BCL2. Phosphorylates SNAI1 at 'Ser-246' promoting its transcriptional repressor activity by increasing its accumulation in the nucleus. In podocytes, promotes NR3C2 nuclear localization. Required for atypical chemokine receptor ACKR2-induced phosphorylation of LIMK1 and cofilin (CFL1) and for the up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. In synapses, seems to mediate the regulation of F-actin cluster formation performed by SHANK3, maybe through CFL1 phosphorylation and inactivation. Plays a role in RUFY3-mediated facilitating gastric cancer cells migration and invasion (PubMed:25766321).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG

Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Cell biology; Signal transduction
Gene Names	PAK1
Clone No.	4F10

Image



Western Blot
Positive WB detected in: MCF7 whole cell lysate, JK whole cell lysate, K562 whole cell lysate, A549 whole cell lysate,ntera2 whole cell lysate, Mouse Heart tissue lysate, Mouse Skeletal Muscle tissue lysate, Mouse Brain tissue lysate, Rat Brain tissue lysate
All lanes: PAK1 antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 61 kDa
Observed band size: 61 kDa



Immunofluorescence staining of Hela cell with CSB-RA287160A0HU at 1:30, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L).

Description

PAK1 is a member of the highly conserved family of serine/threonine protein kinases regulated by Ras?related small G?proteins, Cdc42/Rac1. PAK1 regulates cytoskeleton remodeling, cell motility and invasion, metastasis, cell cycle, apoptosis, cell survival, and angiogenesis. PAK1 has the ability to control cancer cell motility, as well as neurodevelopment, neuroplasticity, and nervous system maturation. PAK1 has been implicated in a variety of cancers, particularly in the regulation of invasive cell metastatic ability.

The recombinant PAK1 antibody is a monoclonal antibody made in vitro using the PAK1 antibody genes that are typically expressed from a plasmid in a stable mammalian cell line. The genes coding for the PAK1 antibody will ultimately assemble into a fully functional antibody after translation. The synthesized antibody is the recombinant antibody against PAK1. It underwent purification using Affinity-chromatography. This recombinant PAK1 antibody is suitable for use in the ELISA, WB, IF to detect the PAK1 protein from Human, Mouse.