SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-PAK1 antibody

Catalog Number: SL2277R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	PAK1
Immunogen:	KLH conjugated synthetic peptide derived from human PAK1: 201-300/545
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 ICC/IF=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human, Rat, (predicted: Mouse, Dog, Rabbit)
Predicted MW.:	60kDa
Subcellular Location:	cytoplasmic The cell membrane
Background:	This gene encodes a family member of serine/threonine p21-activating kinases, known as PAK proteins. These proteins are critical effectors that link RhoGTPases to cytoskeleton reorganization and nuclear signaling, and they serve as targets for the small GTP binding proteins Cdc42 and Rac. This specific family member regulates cell motility and morphology. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2010] **Function:** The activated kinase acts on a variety of targets. Likely to be the GTPase effector that links the Rho-related GTPases to the JNK MAP kinase pathway. Activated by CDC42 and RAC1. Involved in dissolution of stress fibers and reorganization of focal complexes. Involved in regulation of

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	microtubule biogenesis through phosphorylation of TBCB. DVL1 and PAK1 form a ternary complex with MUSK which 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. **Subunit:** Homodimer in its autoinhibited state. Active as monomer. Interacts tightly with GTP-bound but not GDP-bound CDC42/P21 and RAC1. Binds to the caspase-cleaved p110 isoform of CDC2L1 and CDC2L2, p110C, but not the full-length proteins. Component of cytoplasmic complexes, which also contain PXN, ARHGEF6 and GIT1. Interacts with ARHGEF7. Also interacts with CRIPAK. Interacts with NISCH. Interacts with DVL1; mediates the formation of a DVL1, MUSK and PAK1 ternary complex involved in AChR clustering. Probably found in a ternary complex composed of DSCAM, PAK1 and RAC1. Interacts with DSCAM (via cytoplasmic domain); the interaction is direct and enhanced in presence of RAC1. Interacts with SCRIB. Interacts with PDPK1. Interacts (via kinase domain) with RAF1. Interaction with NCK1 and NCK2. **Subcellular Location:** Cytoplasm. Cell junction, focal adhesion. Note=Recruited to focal adhesions upon activation. **Post-translational modifications:** Autophosphorylated when activated by CDC42/p21 and RAC1. Phosphorylation at Thr-423 by PDPK1 results in its activation. **Similarity:** Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily. Contains 1 CRIB domain. Contains 1 protein kinase domain. **Database links:** **Entrez Gene:** 5058 Human **Entrez Gene:** 18479 Mouse **Entrez Gene:** 29431 Rat Omim: 602590 Human **SwissProt:** Q13153 Human **SwissProt:** O88643 Mouse **SwissProt:** P35465 Rat **Unigene:** 435714 Human **Unigene:** 260227 Mouse **Unigene:** 9149 Rat

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[VALIDATION IMAGES]

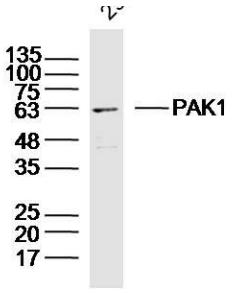


Figure 1. Sample:293T(Human)Cell Lysate at 40 ug Primary: Anti-PAK1(SL2277R)at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 60 kD Observed band size: 60 kD

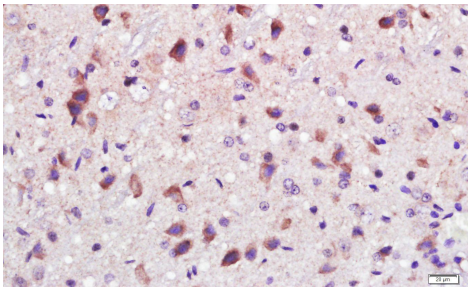


Figure 2. Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PAK1) Polyclonal Antibody, Unconjugated (SL2277R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining

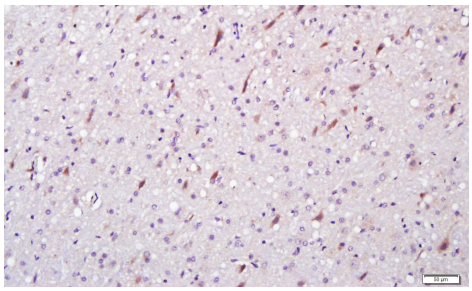


Figure 3. Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PAK1) Polyclonal Antibody, Unconjugated (SL2277R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining

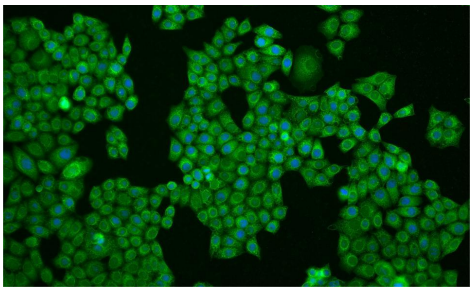


Figure 4. MCF7 cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (PAK1) polyclonal Antibody, Unconjugated (SL2277R) 1:25, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei

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