PAKα (Phospho Ser199) Rabbit pAb

CatalogNo: YP0757 Orthogonal Validated

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat,Monkey

Applications
- WB,IHC,IF,ELISA

MW
- 61kD (Observed)

Isotype
- IgG

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
ELISA 1:10000
IF 1:50-200

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human PAK1 around the phosphorylation site of Ser199. AA range:165-214

Specificity	Phospho-PAKα (S199) Polyclonal Antibody detects endogenous levels of PAKα protein only when phosphorylated at S199.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):TKsVY

Target Information

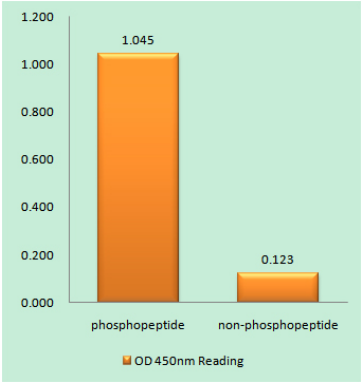
Gene name	PAK1
Protein Name	Serine/threonine-protein kinase PAK 1

Organism	Gene ID	UniProt ID
Human	5058;	Q13153;
Mouse		O88643;
Rat	29431;	P35465;

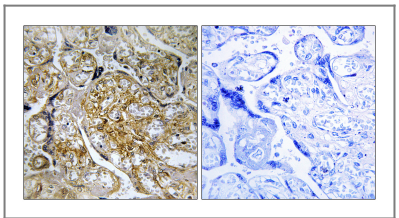
Cellular Localization	Cytoplasm . Cell junction, focal adhesion . Cell projection, lamellipodium . Cell membrane . Cell projection, ruffle membrane . Cell projection, invadopodium . Nucleus, nucleoplasm . Chromosome . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Colocalizes with RUFY3, F-actin and other core migration components in invadopodia at the cell periphery (PubMed:25766321). Recruited to the cell membrane by interaction with CDC42 and RAC1. Recruited to focal adhesions upon activation. Colocalized with CIB1 within membrane ruffles during cell spreading upon readhesion to fibronectin. Upon DNA damage, translocates to the nucleoplasm when phosphorylated at Thr-212 where is co-recruited with MORC2 on damaged chromatin (PubMed:23260667). Localization to the centrosome does not depend upon the presence of gamma-tubulin (PubMed:27012601). Localization of the active, but not inactive, protein to the adhesions and edge of lamellipodia is mediated by interaction with GIT1 (PubMed:11896197). .
Tissue specificity	Overexpressed in gastric cancer cells and tissues (at protein level) (PubMed:25766321).

Function Catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,enzyme regulation:Activated by binding small G proteins. Binding of GTP-bound CDC42 or RAC1 to the autoregulatory region releases monomers from the autoinhibited dimer, enables phosphorylation of Thr-423 and allows the kinase domain to adopt an active structure. Also activated by binding to GTP-bound CDC42, independent of the phosphorylation state of Thr-423. Phosphorylation of Thr-84 by OXSR1 inhibits this activation.,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 microtubule biogenesis through phosphorylation of TBCB. Activity is inhibited in cells undergoing apoptosis, potentially due to binding of CDC2L1 and CDC2L2.,PTM:Autophosphorylated when activated by CDC42/p21 and RAC1.,similarity:Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily.,similarity:Contains 1 CRIB domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Recruited to focal adhesions upon activation.,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.,

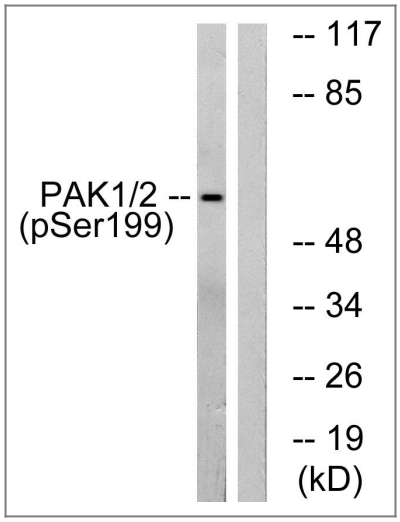
Validation Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using PAK1 (Phospho-Ser199) Antibody



Immunohistochemistry analysis of paraffin-embedded human placenta, using PAK1 (Phospho-Ser199) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from LOVO cells treated with starved 24h, using PAK1 (Phospho-Ser199) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

Orders:	order@immunoway.com
Support:	tech@immunoway.com
Telephone:	877-594-3616 (Toll Free), 408-747-0185
Website:	http://www.immunoway.com
Address:	2200 Ringwood Ave San Jose, CA 95131 USA

Please scan the QR code to access additional product information:
PAKα (Phospho Ser199) Rabbit pAb