

Recombinant Human P21 Protein (Cdc42/Rac)-Activated Kinase 1, GST-tagged

Cat. No. PAK1-1070 **Lot. No.** (See product label)

SPECIFICATION

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| Product Overview | Recombinant full-length human PAK1 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. The PAK1 has been activated in vivo. |
| Species | Human |
| Source | Sf9 Cells |
| Description | PAK1 is a member of the p21-activated kinases (PAKs) which have been implicated in the regulation of cell morphology, motility and transformation. These serine/threonine kinases are activated by and are effectors of small GTPases, CDC42 and RAC. PAK1 belongs to the Group I PAKs which also includes PAK2 and PAK3. PAK1 is a key regulator of the actin cytoskeleton, adhesion and cell motility. Inactive dimeric PAK1 is mainly cytosolic and interaction with the activators Cdc42-GTP and Rac1-GTP stimulates the kinase at the sites of cellular protrusions forming adhesions to the extracellular matrix. |
| Applications | Kinase Assay; Western Blot |
| Molecular Weight | 95kDa |
| Expression System | Sf9 insect cells using baculovirus |
| Form | Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1mM PMSF, 25% glycerol. |

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| Specific Activity | 74nmol/min/mg |
| Purity | >95% |
| Concentration | 0.1 ug/ul |
| Sequences | Full Length |
| Storage | Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. |
| Pathways | Axon guidance; Chemokine signaling pathway; Epithelial cell signaling in Helicobacter pylori infection; ErbB signaling pathway; Fc gamma R-mediated phagocytosis; Focal adhesion; MAPK signaling pathway; Natural killer cell mediated cytotoxicity; Regulation of actin cytoskeleton; Renal cell carcinoma; T cell receptor signaling pathway; Axon guidance; Signaling in Immune system |

GENE INFORMATION

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|------------------------|--|
| Gene Name | PAK1 p21 protein (Cdc42/Rac)-activated kinase 1 [Homo sapiens] |
| Official Symbol | PAK1 |
| Synonyms | PAK1; p21 protein (Cdc42/Rac)-activated kinase 1; p21-activated kinase 1; PAKalpha; MGC130000; MGC130001; STE20 homolog, yeast; p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related); p21/Cdc42/Rac1-activated kinase 1 (STE20 homolog, yeast); Serine/threonine-protein kinase PAK 1; EC 2.7.11.1; PAK-1; p65-PAK; Alpha-PAK |
| Gene ID | 5058 |

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|-------------------------------------|---|
| mRNA Refseq | NM_001128620 |
| Protein Refseq | NP_001122092 |
| MIM | 602590 |
| UniProt ID | Q13153 |
| Chromosome Location | 11q13-q14 |
| Function | ATP binding; collagen binding; nucleotide binding; protein serine/threonine kinase activity; transferase activity |
| PDB rendering based on 1e0a. | |

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