Recombinant PAK5 protein (His tag)

Catalog Number	548430
Synonyms	p21-activated kinase 5; PAK-5; p21-activated kinase 7; PAK-7
Species	Human
Expression System	E. coli
Accession	Q9P286
Molecular Weight	Predictes a molecular mass of 35.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band.

Product Information

Sequence Region	426-719
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 426-719 aa (Q9P286) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Serine/threonine-protein kinase PAK 5 (PAK5) Fragment (residues 426-719) is a high-purity protein encompassing the complete protein kinase domain. This fragment serves as an essential tool for investigating kinase activity, autophosphorylation mechanisms, and signaling pathways involving cytoskeleton regulation, cell survival, and migration, providing researchers with a targeted reagent for domain-specific functional studies. Serine/threonine-protein kinase PAK 5 (PAK5) is a key regulatory enzyme in multiple signaling pathways, influencing cytoskeleton organization, cell proliferation, migration, and survival. It is activated by effectors such as CDC42, RAC1, and growth factor receptors, leading to autophosphorylation and subsequent phosphorylation of substrates like RAF1 (enhancing its kinase activity) and BAD (promoting cell survival). PAK5 also phosphorylates CTNND1 to modulate cell morphology, stabilizes microtubules by inhibiting MARK2, and disrupts F-actin networks, resulting in reduced stress fibers and focal adhesions. Subcellularly, PAK5 shuttles between the nucleus and mitochondria, with mitochondrial localization being critical for its pro-survival functions. This recombinant fragment (426-719) contains the protein kinase domain, enabling focused studies on its catalytic and regulatory roles.