Recombinant PAK3 protein (His tag)

Catalog Number	541880
Synonyms	Beta-PAK; Oligophrenin-3; p21-activated kinase 3; PAK-3
Species	Human
Expression System	E. coli
Accession	O75914
Molecular Weight	Predictes a molecular mass of 35.25 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	260-559
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 260-559 aa (O75914) 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 3 (PAK-3) Fragment (aa 260-559) is a high-purity protein encompassing the complete protein kinase domain. This fragment serves as an essential tool for investigating kinase activity, cytoskeleton regulation, and neuronal development, offering researchers a focused reagent for domain-specific functional studies. Serine/threonine-protein kinase PAK 3 is a key signaling enzyme in humans that regulates diverse cellular processes, including cytoskeleton organization, cell migration, and cell cycle progression. It acts as a downstream effector of GTPases CDC42 and RAC1, undergoing autophosphorylation upon activation. PAK 3 plays a critical role in neuronal function, contributing to dendritic spine morphogenesis, synapse formation, and plasticity through phosphorylation of targets like MAPK4/6 and TNNI3. It is primarily localized in the cytoplasm, where it modulates pathways influencing actomyosin contractility and early neuronal development, as supported by studies in hippocampal neurons.