Recombinant CDK5 protein (His tag)

Catalog Number	530828
Synonyms	Cell division protein kinase 5
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	G5ECH7
Gene ID	176774
Molecular Weight	Predictes a molecular mass of 34.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band.

Product Information

Sequence Region	1-292
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 1-292 aa (G5ECH7) 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 Cyclin-dependent-like kinase 5 (CDK-5) from Caenororhabditis elegans, encompassing the full-length protein kinase domain (residues 1-292). This high-purity fragment is ideal for investigating proline-directed serine/threonine phosphorylation mechanisms, synaptic vesicle trafficking, and neuronal development in research applications. Cyclin-dependent-like kinase 5 (CDK-5) is a proline-directed serine/threonine-protein kinase critical for neuronal function in C. elegans. It regulates polarized trafficking of synaptic vesicles and dense-core vesicles in motor neurons by phosphorylating substrates like lin-10, which controls anterograde trafficking of glutamate receptors. CDK-5 also modulates axonal transport by inhibiting dynein-mediated retrograde movement and promoting kinesin-dependent anterograde transport, influencing synapse formation during neuronal remodeling. Localized to the cytoplasm, dendrites, and presynaptic sites, CDK-5 activity is associated with partners like cdka-1/p35 and responds to hypoxic conditions, positioning it as a key regulator of microtubule polarity and vesicle localization in the nervous system.