Recombinant CDK1 protein (His tag)

Catalog Number	546691
Synonyms	CDK1; Cell division control protein 2 homolog; Cell division protein kinase 1; p34 protein kinase
Species	Human
Expression System	E. coli
Accession	P06493
Molecular Weight	Predictes a molecular mass of 35.75 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	1-297
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 1-297 aa (P06493) 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 CDK1 (Cyclin-dependent kinase 1) fragment (amino acids 1-297) is a high-purity protein encompassing the complete protein kinase domain. This fragment serves as a critical tool for investigating cell cycle regulation, mitotic progression, and kinase activity in eukaryotic systems, offering researchers a functional and well-characterized reagent for biochemical and cellular studies. CDK1, also known as cell division control protein 2 homolog, is a central regulator of the eukaryotic cell cycle, primarily driving the G2-M transition. It functions by forming complexes with cyclins to phosphorylate numerous substrates involved in centrosome separation, nuclear envelope breakdown, chromosome condensation, and spindle assembly. CDK1 localizes to the nucleus, cytoplasm, mitochondria, and centrosome, with dynamic subcellular redistribution during cell cycle phases. Its activity is tightly controlled through phosphorylation and dephosphorylation events, and it plays additional roles in DNA damage response, apoptosis regulation, and epigenetic modulation. The provided fragment includes the essential kinase domain, enabling targeted studies of CDK1's catalytic functions and interactions.