Recombinant CDK8 protein (His tag)

Catalog Number	544641
Synonyms	Cell division protein kinase 8; Mediator complex subunit CDK8; Mediator of RNA polymerase II transcription subunit CDK8; Protein kinase K35
Species	Human
Expression System	E. coli
Accession	P49336
Molecular Weight	Predictes a molecular mass of 43.76 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	1-361
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-361 aa (P49336) 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 Cyclin-dependent kinase 8 (CDK8) fragment (amino acids 1-361) is a high-purity protein encompassing the complete protein kinase domain. This fragment serves as an essential tool for investigating kinase activity, transcriptional regulation, and Mediator complex interactions in cellular signaling and gene expression studies. Cyclin-dependent kinase 8 (CDK8) is a critical component of the Mediator complex, which acts as a coactivator bridge for regulated gene transcription in nearly all RNA polymerase II-dependent genes. CDK8 phosphorylates the C-terminal domain of RNA polymerase II, potentially inhibiting transcription initiation complex formation, and down-regulates the TFIIH complex via phosphorylation of CCNH, contributing to transcriptional repression. It also hyperphosphorylates the intracellular domain of NOTCH, leading to its degradation. CDK8 is localized to the nucleus, where it mediates key regulatory functions in cell division and gene expression pathways.