Recombinant CCNT2 protein (His tag)

Catalog Number	544149
Synonyms	CycT2
Species	Human
Expression System	E. coli
Accession	O60583
Molecular Weight	Predictes a molecular mass of 31.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	1-263
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-263 aa (O60583) 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	Introducing the recombinant Cyclin-T2 (CycT2) fragment (residues 1-263), a high-purity protein designed for studying the Cyclin N-terminal domain's role in transcriptional regulation. This fragment serves as an essential tool for investigating CDK9/cyclin T complex function, RNA polymerase II phosphorylation, and muscle differentiation pathways, providing researchers with a targeted reagent for domain-specific mechanistic studies. Cyclin-T2 (CCNT2) is a regulatory subunit of the cyclin-dependent kinase pair (CDK9/cyclin T) complex, also known as positive transcription elongation factor B (P-TEFB). This complex facilitates the transition from abortive to productive elongation during transcription by phosphorylating the carboxy-terminal domain of RNA polymerase II. Beyond its core transcriptional role, Cyclin-T2 participates in muscle differentiation through interactions with MYOD1 and PKN1, enhances transcription of muscle-specific genes, and contributes to early embryo development. During microbial infection, it promotes transcriptional activation of herpes simplex virus 1 promoters. The protein localizes to both the cytoplasm (perinuclear region) and nucleus, with nuclear localization observed in differentiating cells.