

Bioactive

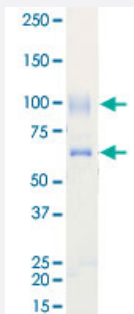
Full-Length

CDK9/CCNT1 (Human) Recombinant Protein

Catalog # P5518

Size 5 ug

Applications



Result of activity analysis

Result of activity analysis

□

Specification

Product Description	Human CDK9 (NP_001252.1, 1 a.a. - 372 a.a.) and CCNT1 (NP_001231.2, 1 a.a. - 726 a.a.) full-length recombinant protein with GST tag expressed in baculovirus infected Sf21 cells.
Host	insect
Theoretical MW (kDa)	70
Form	Liquid
Preparation Method	Baculovirus infected insect cell (Sf21) expression system
Purification	Glutathione sepharose chromatography
Purity	95 % by SDS-PAGE/CBB staining

Activity	The activity was measured by off-chip mobility shift assay. The enzyme was incubated with fluorescence-labeled substrate and Mg(or Mn)/ATP. The phosphorylated and unphosphorylated substrates were separated and detected by LabChip 3000. Substrate: CDK9 substrate. ATP: 100 uM.
Quality Control Testing	Loading 1 ug protein in SDS-PAGE
Storage Buffer	In 50 mM Tris-HCl, 150 mM NaCl, pH 7.5 (0.1% CHAPS, 1 mM DTT, 10% glycerol)
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Result of activity analysis Result of activity analysis

Applications

- Functional Study
- SDS-PAGE

Gene Info — CCNT1

Entrez GeneID	904
Protein Accession#	NP_001252.1 (Gene ID : 1025);NP_001231.2 (Gene ID : 904)
Gene Name	CCNT1
Gene Alias	CCNT, CYCT1
Gene Description	cyclin T1
Omim ID	602506
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin tightly associates with CDK9 kinase, and was found to be a major subunit of the transcription elongation factor p-TEFb. The kinase complex containing this cyclin and the elongation factor can interact with, and act as a cofactor of human immunodeficiency virus type 1 (HIV-1) Tat protein, and was shown to be both necessary and sufficient for full activation of viral transcription. This cyclin and its kinase partner were also found to be involved in the phosphorylation and regulation of the carboxy-terminal domain (CTD) of the largest RNA polymerase II subunit. [provided by RefSeq]

Other Designations

CDK9-associated C-type protein|cyclin C-related protein|cyclin T1b|subunit of positive elongation transcription factor b

Gene Info — CDK9**Entrez GeneID**[1025](#)**Protein Accession#**[NP_001252.1 \(Gene ID : 1025\);NP_001231.2 \(Gene ID : 904\)](#)**Gene Name**

CDK9

Gene Alias

C-2k, CDC2L4, CTK1, PITALRE, TAK

Gene Description

cyclin-dependent kinase 9

Omim ID[603251](#)**Gene Ontology**[Hyperlink](#)**Gene Summary**

The protein encoded by this gene is a member of the cyclin-dependent protein kinase (CDK) family. CDK family members are highly similar to the gene products of *S. cerevisiae* cdc28, and *S. pombe* cdc2, and known as important cell cycle regulators. This kinase was found to be a component of the multiprotein complex TAK/P-TEFb, which is an elongation factor for RNA polymerase II-directed transcription and functions by phosphorylating the C-terminal domain of the largest subunit of RNA polymerase II. This protein forms a complex with and is regulated by its regulatory subunit cyclin T or cyclin K. HIV-1 Tat protein was found to interact with this protein and cyclin T, which suggested a possible involvement of this protein in AIDS. [provided by RefSeq]

Other Designations

CDC2-related kinase|OTTHUMP00000022198|cell division protein kinase 9|serine/threonine protein kinase PITALRE

Disease

- [Disease Progression](#)
- [Disease Susceptibility](#)
- [HIV Infections](#)