

CDK8-CCNC-MED12 Protein, Human (Sf9)

Cat. No.:	HY-P701372
Synonyms:	CDK8; CCNC; MED12; Cyclin-dependent kinase 8; Cell division protein kinase 8; Mediator complex subunit CDK8; Mediator of RNA polymerase II transcription subunit CDK8; Protein kinase K35; Cyclin-C; SRB11 homolog; hSRB11; Mediator of RNA polymerase II transcription subunit 12; Activator-recruited cofactor 240 kDa component; ARC240; CAG repeat protein 45; Mediator complex subunit 12; OPA-containing protein; Thyroid hormone receptor-associated protein complex 230 kDa component; Trap230; Trinucleotide repeat-containing gene 11 protein
Species:	Human
Source:	Sf9 insect cells
Accession:	P49336 (M1-Y464)&P24863 (M1-S283)&Q93074 (M1-D100)
Gene ID:	1024&892&9968
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

The CDK8-CCNC-MED12 protein is a crucial component of the Mediator complex, a coactivator integral to the regulation of gene transcription for nearly all RNA polymerase II-dependent genes. As part of the Mediator complex, it acts as a bridge, conveying information from gene-specific regulatory proteins to the basal RNA polymerase II transcription machinery. This complex is recruited to promoters through direct interactions with regulatory proteins, serving as a scaffold for the assembly of a functional pre-initiation complex with RNA polymerase II and general transcription factors. CDK8-CCNC-MED12 exerts its regulatory functions by phosphorylating the C-terminal domain (CTD) of the large subunit of RNA polymerase II, potentially inhibiting the formation of a transcription initiation complex. Furthermore, it phosphorylates CCNH, leading to the down-regulation of the TFIIF complex and subsequent transcriptional repression. Notably, CDK8-CCNC-MED12 is recruited through interaction with MAML1, contributing to the hyperphosphorylation of the intracellular domain of NOTCH and facilitating its degradation. These multifaceted roles underscore the significance of CDK8-CCNC-MED12 in orchestrating the intricate processes of gene transcription regulation.

Caution: Product has not been fully validated for medical applications. For research use only.

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