

CDK12-CCNK Heterodimer Protein, Human (Sf9)

Cat. No.:	HY-P701360
Synonyms:	CDK12; CCNK; Cyclin-dependent kinase 12; Cdc2-related kinase; arginine/serine-rich; CrkRS; Cell division cycle 2-related protein kinase 7; CDC2-related protein kinase 7; Cell division protein kinase 12; hCDK12; Cyclin-K
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9NYV4 (Q696-S1082)&O75909 (M1-S300)
Gene ID:	51755&8812
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 CDK12-CCNK heterodimer protein functions as a cyclin-dependent kinase, playing a crucial role in transcription elongation by phosphorylating the C-terminal domain (CTD) of the large subunit of RNA polymerase II (POLR2A). This kinase is a key regulator of gene expression, particularly involved in DNA repair processes and the maintenance of genomic stability. Its phosphorylation activity is selective, preferring 'Ser-5' in CTD repeats already phosphorylated at 'Ser-7,' but it can also target 'Ser-2.' CDK12-CCNK is essential for RNA splicing, potentially through the phosphorylation of SRSF1/SF2. Additionally, it participates in the regulation of MAP kinase activity, suggesting its involvement in influencing responses to estrogen inhibitors.
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Caution: Product has not been fully validated for medical applications. For research use only.

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