

## CDK3-CCNE1 Heterodimer Protein, Human (Sf9, GST, FLAG, His)

Cat. No.:	HY-P701365
Synonyms:	CDK3; CCNE1; Cyclin-dependent kinase 3; Cell division protein kinase 3; G1/S-specific cyclin-E1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q00526 (M1-H305)&P24864 (M1-E410)
Gene ID:	1018&898
Molecular Weight:	61.6 kDa&41.9 kDa

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM HEPES, pH7.5, 150 mM NaCl, 5% 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	<p>CDK3 Protein is a serine/threonine-protein kinase that assumes a pivotal role in the regulation of the eukaryotic cell cycle, specifically influencing G0-G1 and G1-S transitions. During interphase, it interacts with CCNC/cyclin-C. The kinase phosphorylates key substrates, including histone H1, ATF1, RB1, and CABLES1. ATF1 phosphorylation induced by CDK3-CCNE1 triggers ATF1 transactivation and transcriptional activities, consequently fostering cell proliferation and transformation. Moreover, the CDK3/cyclin-C-mediated phosphorylation of RB1 is essential for the G0-G1 transition. Notably, CDK3-CCNE1 contributes to the G1-S transition, potentially by participating in the activation of E2F1, E2F2, and E2F3 in a RB1-independent manner. This intricate interplay positions CDK3-CCNE1 as a crucial orchestrator of cell cycle progression.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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