

Human CCNE1 / Cyclin-E1 Protein (His Tag)



Sino Biological Inc.
Biological Solution Specialist

Catalog Number: 10902-H07B

General Information

Gene Name Synonym:

CCNE1; AW538188; CycE1

Protein Construction:

A DNA sequence encoding the full length of human CCNE1 isoform 1 (NP_001229.1) (Met 1-Ala 410) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized human CCNE1 (Cat:10902-H07B) at 10 µg/ml (100 µl/well) can bind biotinylated human CDK4 (Cat:10732-H09B). The EC_{50} of biotinylated human CDK4 (Cat:10732-H09B) is 0.10-0.32 µg/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human CCNE1 consists of 429 amino acids and predicts a molecular mass of 49.3 kDa. It migrates as an approximately 47 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.5, 10% glycerol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

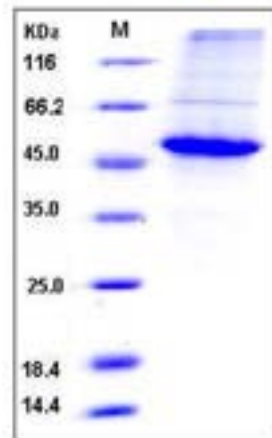
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Cyclin E1 is a member of the highly conserved cyclin family and belongs to the E-type cyclin that functions as a regulator of S phase entry and progression in mammalian cells. Cyclin E1 serves as regulatory subunits that bind, activate, and provide substrate for its associated cyclin-dependent kinase2 (CDK2), whose activity is essential for cell cycle G1 / S transition. Over expression of this encoding gene has been found in many tumors, which results in chromosome instability and by extension, induce tumorigenesis. This protein was also found to associate with, and be involved in, the phosphorylation of NPAT protein (nuclear protein mapped to the ATM locus), which participates in cell-cycle regulated histone gene expression and plays a critical role in promoting cell-cycle progression in the absence of pRB. In general, cyclin E1, as an activator of phospho-CDK2 (pCDK2), is important for cell cycle progression and is frequently overexpressed in cancer cells.

References

1. Honda R, et al. (2005) The structure of cyclin E1 / CDK2: implications for CDK2 activation and CDK2-independent roles. The EMBO Journal. 24: 452-63.
2. Geng Y, et al. (2007) Kinase-Independent Function of Cyclin E. 25(1): 127-39.

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