



## Recombinant Protein Technical Manual

**Recombinant Human CCNE1/Cyclin-E1 Protein (His & GST Tag)(Active)**  
RPES5238

### Product Data:

**Product SKU:** RPES5238

**Size:** 20µg

**Species:** Human

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** NP\_001229.1

### Protein Information:

**Molecular Mass:** 75 kDa

**AP Molecular Mass:** 70 kDa

**Tag:** N-His & GST

**Bio-activity:** Measured by its binding ability in a functional ELISA. Immobilized human HG3C-CCNE1 at 10 µg/ml (100 µl/well) can bind biotinylated human GST-CDK4, The EC50 of biotinylated human GST-CDK4 is 45.006.0 ng/ml.

**Purity:** > 82 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% gly, 1mM GSH, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** CCNE

## Immunogen Information:

**Sequence:** Met 1-Ala 410

## Background:

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.