

# Recombinant Human cyclin-dependent kinase 2, His-tagged

**Cat. No.** CDK2-655H    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	CDK2, 1-298aa Human, His tag, Insect cell
<b>Species</b>	Human
<b>Source</b>	Insect Cells
<b>ProteinLength</b>	1-298 a.a.
<b>Description</b>	<p>Cyclin-dependent kinase 2, also known as CDK2, phosphorylates CTNNB1, USP37, p53/TP53, NPM1, CDK7, RB1, BRCA2, MYC, NPAT, EZH2. This protein acts at the G1-S transition to promote the E2F transcriptional program and the initiation of DNA synthesis, and modulates G2 progression; controls the timing of entry into mitosis/meiosis by controlling the subsequent activation of cyclin B/CDK1 by phosphorylation, and coordinates the activation of cyclin B/CDK1 at the centrosome and in the nucleus. This protein is crucial role in orchestrating a fine balance between cellular proliferation, cell death, and DNA repair in human embryonic stem cells (hESCs). Recombinant human CDK2 protein, fused to His-tag at C-terminus, was expressed in insect cells using baculovirus expression system and purified by using conventional chromatography techniques.</p>
<b>Form</b>	Liquid. In Phosphate buffered saline (pH7.4), 30% glycerol, 2mM DTT, 0.1mM PMSF
<b>Molecular Mass</b>	34.9 kDa (306aa)
<b>AA Sequence</b>	MENFQKVEKI GEGTYGVVYK ARNKLTGEVV ALKKIRLDTE TEGVPSTAIR

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EISLLKELNH PNIVKLLDVI HTENKLYLVF EFLHQDLKKF MDASALTGIP  
 LPLIKSYLFQ LLQGLAFCHS HRVLHRDLKP QNLLINTEGA IKLADFGAR  
 AFGVPVRTYT HEVVTLWYRA PEILLGCKYY STAVDIWSLG CIFAEMVTRR  
 ALFPGDSEID QLFRIFRTLK TPDEVVWPGV TSMPDYKPSF PKWARQDFSK  
 VVPPLDEDGR SLLSQMLHYD PNKRISAKAA LAHPFFQDVT KPVPHLRLLLE  
 HHHHHH

<b>Purity</b>	>90% by SDS - PAGE
<b>Storage</b>	Can be stored at +4C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles.
<b>Concentration</b>	0.5 mg/ml (determined by Bradford assay)

## GENE INFORMATION

<b>Gene Name</b>	CDK2 cyclin-dependent kinase 2 [ Homo sapiens ]
<b>Official Symbol</b>	CDK2
<b>Synonyms</b>	CDK2; cyclin-dependent kinase 2; p33 protein kinase; cell division kinase 2; cdc2-related protein kinase; cell division protein kinase 2; p33(CDK2);
<b>Gene ID</b>	1017
<b>mRNA Refseq</b>	NM_001798
<b>Protein Refseq</b>	NP_001789
<b>MIM</b>	116953

<b>UniProt ID</b>	P24941
<b>Chromosome Location</b>	12q13
<b>Pathway</b>	APC/C-mediated degradation of cell cycle proteins, organism-specific biosystem; Activation of ATR in response to replication stress, organism-specific biosystem; Activation of the pre-replicative complex, organism-specific biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; BARD1 signaling events, organism-specific biosystem; CDK-mediated phosphorylation and removal of Cdc6, organism-specific biosystem; Cell Cycle, organism-specific biosystem;
<b>Function</b>	ATP binding; cyclin binding; cyclin-dependent protein kinase activity; cyclin-dependent protein kinase activity; contributes_to histone kinase activity; kinase activity; metal ion binding; nucleotide binding; protein binding; protein kinase activity;

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