

Recombinant Human cyclin-dependent kinase 2, His-tagged

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

SPECIFICATION

Product Overview	CDK2, 1-298aa Human, His tag, Insect cell
Species	Human
Source	Insect Cells
ProteinLength	1-298 a.a.
Description	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.
Form	Liquid. In Phosphate buffered saline (pH7.4), 30% glycerol, 2mM DTT, 0.1mM PMSF
Molecular Mass	34.9 kDa (306aa)
AA Sequence	MENFQKVEKI GEGTYGVVYK ARNKLTGEVV ALKKIRLDTE TEGVPSTAIR

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

Purity >90% by SDS - PAGE

Storage 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.

Concentration 0.5 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name CDK2 cyclin-dependent kinase 2 [Homo sapiens]

Official Symbol CDK2

Synonyms CDK2; cyclin-dependent kinase 2; p33 protein kinase; cell division kinase 2; cdc2-related protein kinase; cell division protein kinase 2; p33(CDK2);

Gene ID 1017

mRNA Refseq NM_001798

Protein Refseq NP_001789

MIM 116953

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UniProt ID	P24941
Chromosome Location	12q13
Pathway	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;
Function	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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