

Recombinant Human Cyclin-Dependent Kinase 2, GST-tagged

Cat. No. CDK2-999H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human CDK2 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
Description	CDK2 is a member of the Cyclin-Dependent Kinase family that is ubiquitously expressed. CDK2 is a catalytic subunit of the cyclin-dependent protein kinase complex, whose activity is restricted to the G1-S phase, and essential for cell cycle G1/S phase transition. CDK2 associates with and is regulated by the regulatory subunits of the complex including Cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A) and p27Kip1 (CDKN1B). CDK2 phosphorylates multiple cellular substrates including SMAD3 and FOXO1. Phosphorylation of FOXO1 leads to its inhibition.
Applications	Western Blot
Molecular Weight	94 kDa
Expression System	Sf9 insect cells using baculovirus
Form	Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol.
Specific Activity	31 nmol/min/mg

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Purity	> 80 %
Concentration	0.1 ug/ul
Sequences	Full-length
Storage	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Pathways	Activation of ATR in response to replication stress; Activation of the pre-replicative complex; B Cell Receptor Signaling Pathway; BARD1 signaling events; Cell Cycle Checkpoints; Cell Cycle; Cyclin E associated events during G1/S transition; DNA Replication; DNA Replication Pre-Initiation; Delta-Notch Signaling Pathway; E2F transcription factor network; FoxO family signaling; G2/M Checkpoints; Herpes simplex infection; Measles

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; EC 2.7.11.22; cell division protein kinase 2; CCNA2; p33(CDK2); cyclin A2; CCN1; CCNA; Cyclin-A; Cyclin-A2
Gene ID	1017
mRNA Refseq	NM_001798

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Protein Refseq	NP_001789
MIM	116953
UniProt ID	P24941
Chromosome Location	12q13
Function	ATP binding; cyclin binding; cyclin-dependent protein kinase activity; contributes_to histone kinase activity; kinase activity; nucleotide binding; protein binding; protein kinase activity
Protein CDK2 PDB 1aq1.	