

Recombinant Human Cyclin-Dependent Kinase 4, GST-tagged

Cat. No. CDK4-1000H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human CDK4 was expressed in E. coli cells using a N-terminal GST tag.
Species	Human
Source	E.coli
Description	CDK4 is a member of the cyclin-dependent protein kinases and is involved in the control of cell proliferation during the G1 phase of the cell cycle. CDK4 forms a complex with the D-type cyclins which regulate its activity. CDK4 is inhibited by p16, also known as cyclin-dependent kinase inhibitor-2. CDK4 can mediate phosphorylation of the C-terminal region of RB protein leading to an active transcriptional repression of E2F complex. CDC37 and HSP90 can preferentially associate with the fraction of CDK4 not bound to D-type cyclins. Pharmacologic inactivation of CDC37/HSP90 function leads to reduced stability of CDK4. SMAD3 is a major physiologic substrate of the G1 cyclin-dependent kinases CDK4 and CDK2.
Applications	Kinase Assay; Western Blot
Molecular Weight	57 kDa
Expression System	E. coli
Form	Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol.

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Purity	> 80 %
Concentration	0.2 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	ATF-2 transcription factor network; B Cell Receptor Signaling Pathway; Bladder cancer; Calcineurin-regulated NFAT-dependent transcription in lymphocytes; Cell Cycle; Cell cycle; Chronic myeloid leukemia; Cyclin D associated events in G1; Diabetes pathways; FOXM1 transcription factor network; G1 Phase; G1 to S cell cycle control; Glioma; HTLV-I infection; IL-7 Signaling Pathway

GENE INFORMATION

Gene Name	CDK4 cyclin-dependent kinase 4 [Homo sapiens]
Official Symbol	CDK4
Synonyms	CDK4; cyclin-dependent kinase 4; CMM3; PSK-J3; MGC14458; Cyclin-dependent kinase 4; EC 2.7.11.22; Cell division protein kinase 4; cell division kinase 4; melanoma cutaneous malignant, 3
Gene ID	1019
mRNA Refseq	NM_000075
Protein Refseq	NP_000066

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MIM	123829
UniProt ID	P11802
Chromosome Location	12q14
Function	ATP binding; cyclin-dependent protein kinase activity; nucleotide binding; protein binding; protein kinase activity
Rendering based on PDB 1LD2.	