Datasheet for ABIN7195309

CDK2 Protein (His tag)

Go to Product page

Overview

Quantity:	50 µg
Target:	CDK2
Origin:	Human
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CDK2 protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human CDK2 Protein (Baculovirus, His Tag)
Sequence:	Met 1-Leu 298
Characteristics:	A DNA sequence encoding the human cyclin-dependent kinase 2 isoform 1 (NP_001789.2) (Met 1-Leu 298) was expressed, fused with a polyhistidine tag at the C-terminus.
Purity:	> 85 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg of the protein as determined by the LAL method.

Target Details

Target:	CDK2
Alternative Name:	CDK2 (CDK2 Products)
Background:	Background: CDK2 is a member of the Ser/Thr protein kinase family. This protein kinase is highly similar to the gene products of S. cerevisiae cdc28, and S. pombe cdc2. It is a catalytic subunit of the cyclin-dependent protein kinase complex, whose activity is restricted to the G1-S

Target Details

	phase, and essential for cell cycle G1/S phase transition. Cdks (cyclin-dependent kinases) are heteromeric serine/threonine kinases that control progression through the cell cycle in concert with their regulatory subunits, the cyclins. Cdks are constitutively expressed and are regulated by several kinases and phosphastases, including Wee1, CDK-activating kinase and Cdc25 phosphatase. Although there are 12 different cdk genes, only 5 have been shown to directly drive the cell cycle (Cdk1, -2, -3, -4, and -6). Following extracellular mitogenic stimuli, cyclin D gene expression is upregulated. Cdk4 forms a complex with cyclin D and phosphorylates Rb protein, leading to liberation of the transcription factor E2F. E2F induces transcription of genes including cyclins A and E, DNA polymerase and thymidine kinase. Cdk4-cyclin E complexes form and initiate G1/S transition. Subsequently, Cdk1-cyclin B complexes form and induce G2/M phase transition. Cdk1-cyclin B activation induces the breakdown of the nuclear envelope and the initiation of mitosis. CDK2 associates with and regulated by the regulatory subunits of the complex including cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A) and p27Kip1 (CDKN1B). Its activity is also regulated by its protein phosphorylation. CDK2 is involved in the control of the cell cycle. It also interacts with cyclins A, B1, B3, D, or E. Activity of CDK2 is maximal during S phase and G2. Synonym: Cyclin-Dependent Kinase 2, Cell Division Protein Kinase 2, p33 Protein Kinase, CDK2, CDKN2
Molecular Weight:	35 kDa
NCBI Accession:	NP_001789
Pathways:	PI3K-Akt Signaling, Cell Division Cycle, Mitotic G1-G1/S Phases, DNA Replication, M Phase, Synthesis of DNA

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile 50 mM Tris, 100 mM NaCl, pH 8.0, 10 % glycerol
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C.

Handling

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.