Recombinant Human CDK1&Cyclin A2 Kinase

Catalog No.: RP03301LQ

Sequence Information

Species	Gene ID
Human	983&890

Swiss Prot	Tags
P06493&P20248	N-GST (CDK1) & N-His (Cyclin A2)

Synonyms

CDK1; CDC2; CDC28A; CDKN1; P34CDC2; Cyclin-dependent kinase 1; Cyclin A2; CCNA2; CCN1; CCNA; Cyclin-A2

Product Information

Source	Purification
Baculovirus-Insect Cells	≥ 90 % as determined by SDS-PAGE;≥ 90 % as determined by HPLC.

Calculated MW	Observed MW
60.6 kDa/32.8 kDa	50-60 kDa/25-30 kDa

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Supplied as a 0.22 μm filtered solution in 20 mM Tris-HCl, 200 mM NaCl, 20% glycerol, 1 mM DTT. (pH 7.5). Contact us for customized product form or formulation.

Reconstitution

Please use running water to thaw it quickly.

Background

CDK1 also known as cyclin-dependent kinase 1 or cell division cycle protein 2 homolog is a highly conserved protein that functions as a serine/threonine protein kinase, and is a key player in cell cycle regulation. CDK1 is a small protein (approximately 34 kDa), and is highly conserved. When bound to its cyclin partners, CDK1 phosphorylation leads to cell cycle progression. Given its essential role in cell cycle progression, CDK1 is highly regulated. Most obviously, CDK1 is regulated by its binding with its cyclin partners. Cyclin binding alters access to the active site of CDK1, allowing for CDK1 activity. Cyclin A2 belongs to the cyclin family, whose members regulate cell cycle progression by interacting with CDK kinases. Cyclin A2 is unique in that it can activate two different CDK kinases; it binds CDK2 during S phase, and CDK1 during the transition from G2 to M phase. Recent studies have shown that the cyclin A2-CDK1 complex triggers cyclin B1-CDK1 activation which results in chromatin condensation and the breakdown of the nuclear envelope.

Basic Information

Description

Recombinant Human CDK1&Cyclin A2 Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Met1-Met297 (CDK1) & Glu174-Leu432 (Cyclin A2)) of Human CDK1&CCNA2 (Accession #P06493&P20248) fused with a N-GST (CDK1) & N-His (Cyclin A2) tag.

Activity

The activity of CDK1/Cyclin A2 is based on the MSA technology, and the content and ratio of the substrate and the product are directly separated and detected in real time and dynamically by the different migration rates of the substrate and the product after the enzymatic reaction.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -70℃

Operational Notes

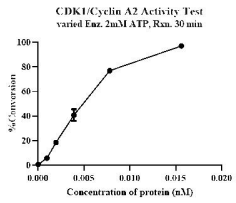
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

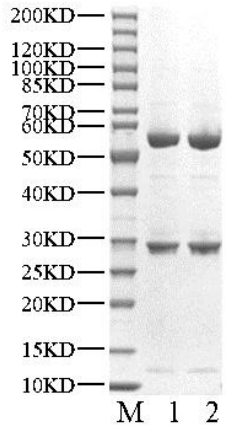
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For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

Validation Data



The activity of CDK1/Cyclin A2 is based on the MSA technology, and the content and ratio of the substrate and the product are directly separated and detected in real time and dynamically by the different migration rates of the substrate and the product after the enzymatic reaction.



Recombinant Human CDK1&Cyclin A2 Kinase was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.