

Catalog No.: RP03301LQ **Recombinant**

Species	Gene ID	Swiss Prot
Human	983&890	P06493&P20248

N-GST (CDK1) & N-His (Cyclin A2)

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

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

60.6 kDa/32.8 kDa	50-60 kDa/25-30 kDa
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< 1 EU/μg of the protein by LAL method.

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.

Please use running water to thaw it quickly.

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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.

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.

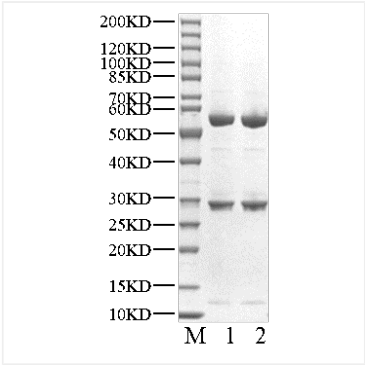
The activity of CDK1/Cyclin A2 is based on the MSA technology, and the content and ratio of the substrate and the product are directly separated and detected in real time and dynamically by the different migration rates of the substrate and the product after the enzymatic reaction.

Store at -70°C. This product is stable at $\leq -70^{\circ}\text{C}$ for up to 1 year from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature.

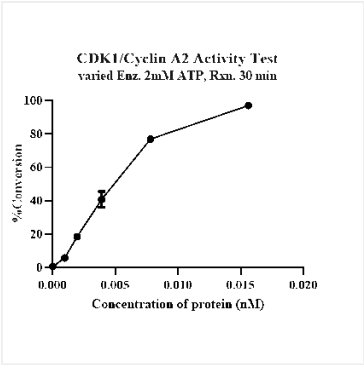
Aliquots below 10 μ L are not advisable. Product must not be stored in diluted solutions. Avoid repeated freeze-thaw cycles.

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Validation Data



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



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