Recombinant Mouse CDC2 Kinase/CDK1 Protein (His &GST Tag)

Catalog Number: PKSM040292

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

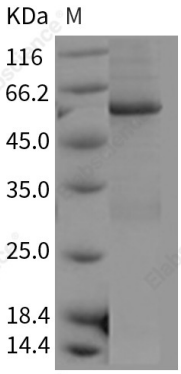
Description

Species	Mouse
Source	Baculovirus-Insect Cells-derived Mouse CDC2 Kinase/CDK1 protein Met1-Met297, with an N-terminal His & GST
Calculated MW	61.9 kDa
Observed MW	57 kDa
Accession	P11440
Bio-activity	Kinase activity untested

Properties

Purity	> 85 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/ gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of 20mM Tris, 500mM Nacl, 10% glycerol, pH 8.0

Data



> 85 % as determined by reducing SDS-PAGE.

Background

CDC2, also known as CDK1, contains 1 protein kinase domain and belongs to the protein kinase superfamily, CMGC Ser/Thr protein kinase family, CDC2/CDKX subfamily. CDC2 is a catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G1/S and G2/M phase transitions of eukaryotic cell cycle. Mitotic cyclins stably associate with CDC2 and function as regulatory subunits. The kinase activity of CDK1 is controlled by cyclin accumulation and destruction through the cell cycle. The phosphorylation and dephosphorylation of CDC2 also play important regulatory roles in cell cycle control. It is required in higher cells for entry into S-phase and mitosis. CDC2 also is a cyclin-dependent kinase which displays CTD kinase activity and is required for RNA splicing. It has CTD kinase activity by hyperphosphorylating the C-terminal heptapeptide repeat domain (CTD) of the largest RNA polymerase II subunit RPB1, thereby acting as a key regulator of transcription elongation. CDK1 is required for RNA splicing, possibly by phosphorylating SRSF1/SF2. It is involved in regulation of MAP kinase activity, possibly leading to affect the response to estrogn inhibitors.

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