Recombinant Protein Technical Manual

Recombinant Human CDC2 Kinase/CDK1 Protein (GST Tag)

RPES3180

Product Data:

Product SKU: RPES3180

Size: 50µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_001777.1

Protein Information:

Molecular Mass: 60 kDa

AP Molecular Mass: 53 kDa

Tag: N-GST

Bio-activity:

Purity: > 92 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 50mM Tris, 100mM NaCl, 0.5mM PMSF, 0.5mM EDTA, 0.5mM GSH, pH 8.0

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: CDC2;CDC28A;P34CDC2

Immunogen Information:

Sequence: Met 1-Met 297

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.