Cytosolic Protamine Kinase from bovine kidney

Product Number C 4237
Storage Temperature -70 °C

Synonym: cPK

Product Description
Cytosolic Protamine Kinase (cPK) is isolated from bovine kidney and has a molecular mass of approximately 45 kDa.

Cytosolic protamine kinase is involved in the regulation of protein synthesis and indirectly associated with numerous cellular processes. This enzyme is a distinct insulin-stimulated kinase involved in the phosphorylation of eukaryotic Initiation Factor 4E (eIF4E). This process is significant in that it is key to initiating translation by mRNA. This protein appears to be inactivated by protein phosphatase 2A family members and may also be inhibited by microcystin, okadecic acid, and ATP. The phosphorylation process is reversible and MBPK1 and MBPK2 (Myelin Basic Protein Kinase 1 and 2) may reactivate cytosolic protamine kinase.

The product is supplied as a solution in 50 mM Tris-HCl, pH 7.0, containing 14 mM 2-mercaptoethanol, 1 mM benzamidine, 0.1 mM PMSF, 1 mM EDTA, and 50% glycerol.

Specific Activity: approximately 17,000 units per mg protein (approximately 2 units per vial).

Unit Definition: One unit is the amount of enzyme that will incorporate 1 nmole of phosphoryl groups using protamine sulfate as a substrate per minute at pH 7.0 at 30 °C.

Purity: minimum 90% (SDS-PAGE)

Precautions and Disclaimer
This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
The product should be stored at -70 °C. Avoid freeze-thaw cycles. Store working aliquots at -70 °C. Stable for 24-48 hours at 2-8 °C.

References

LCM/MAM 9/02

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