

Chk1 Protein, Mouse (sf9, His-GST)

Cat. No.:	HY-P74253
Synonyms:	Serine/threonine-protein kinase Chk1; Chek1; Chk1
Species:	Mouse
Source:	Sf9 insect cells
Accession:	O35280 (M1-T476)
Gene ID:	12649
Molecular Weight:	Approximately 78 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 8.5, 3 mM DTT, 10% gly.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

Chk1, a serine/threonine-protein kinase, plays a crucial role in orchestrating checkpoint-mediated cell cycle arrest and facilitating DNA repair in response to DNA damage or unreplicated DNA. Additionally, it exerts negative regulation on cell cycle progression during unperturbed cell cycles, employing various mechanisms to safeguard genome integrity. Chk1 recognizes the substrate consensus sequence [R-X-X-S/T] and phosphorylates key targets such as CDC25A, CDC25B, CDC25C, and RAD51. Notably, phosphorylation of CDC25A and CDC25C creates binding sites for 14-3-3 proteins, inhibiting their activity and impeding cell cycle progression. Chk1's intricate involvement extends to the phosphorylation of TP53, promoting its activation, leading to cell cycle arrest, and suppressing cellular proliferation. Furthermore, Chk1 phosphorylates histone H3.1, influencing epigenetic regulation of gene expression. Its multifaceted role encompasses the phosphorylation of RB1, SPRTN, TLK1, and FANCE, contributing to the regulation of transcription, chromatin assembly, and DNA repair processes. Chk1 emerges as a pivotal player in maintaining genomic stability and orchestrating cellular responses to diverse challenges.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA