

PLK1 Protein, Mouse (sf9, His)

Cat. No.:	HY-P73706
Synonyms:	Serine/threonine-protein kinase PLK1; PLK-1; STPK13
Species:	Mouse
Source:	Sf9 insect cells
Accession:	Q07832 (M1-S603)
Gene ID:	18817
Molecular Weight:	Approximately 65 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 7.4, 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

The protein SGO1 plays a role in regulating the cohesion of centrioles. It phosphorylates FBXO5/EMI1, a negative regulator of the APC/C complex, leading to its degradation. It also acts as a negative regulator of p53 family members, phosphorylating TOPORS to inhibit the sumoylation of p53/TP53 and enhance its ubiquitination and degradation. SGO1 phosphorylates the transactivation domain of the transcription factor p73/TP73, inhibiting its transcriptional activation and pro-apoptotic functions. It also phosphorylates BORA, promoting its degradation. SGO1 is involved in the regulation of AURKA function, DNA damage checkpoint recovery, and entry into mitosis. It phosphorylates MISP, stabilizing microtubule attachments required for proper spindle positioning. In meiosis, SGO1, along with MEIKIN, regulates kinetochore function and protects centromeric cohesin from separase-mediated cleavage. SGO1 phosphorylates CEP68 and promotes its degradation. It also phosphorylates DCTN1, regulating nuclear envelope breakdown during prophase. SGO1 phosphorylates the heat shock transcription factor HSF1, promoting its nuclear translocation in response to heat shock. In early mitotic period, SGO1 phosphorylates HSF1, regulating its localization to the spindle pole and subsequent degradation. SGO1 phosphorylates RIOK2, regulating mitotic progression. Finally, SGO1 phosphorylates DZIP1, regulating the localization of the BBSome during mitosis, a protein complex involved in cilium biogenesis.

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

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