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CHK1, Active recombinant protein

CHK, Serine/threonine-protein kinase Chk1
Catalog # PBV11310r

Specification

CHK1, Active recombinant protein - Product info

Primary Accession	O14757
Concentration	0.1
Calculated MW	82.0 kDa KDa

CHK1, Active recombinant protein - Additional Info

Gene ID	1111
Gene Symbol	CHK1

Other Names
CHK, Serine/threonine-protein kinase Chk1, CHK1 checkpoint homolog, Cell cycle checkpoint kinase, Checkpoint kinase-1

Source	Baculovirus (Sf9 insect cells)
Assay&Purity	SDS-PAGE; ≥90%
Assay2&Purity2	HPLC;
Recombinant	Yes

Format
Liquid

Storage
-80°C; Recombinant protein in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 30% glycerol.).

CHK1, Active recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CHK1, Active recombinant protein - Images

CHK1, Active recombinant protein - Background

CHK1 is a 56 kd serine/threonine protein kinase that was originally identified in fission yeast to play a role in activation of the DNA damage checkpoint in the G2 phase of the cell cycle (1). CHK1 appears to function downstream of several of the known fission yeast checkpoint gene products,

including that encoded by rad3+, a gene with sequence similarity to the ATM gene mutated in patients with ataxia telangiectasia (2). In vitro, CHK1 binds to and phosphorylates the dual-specificity protein phosphatases Cdc25A, Cdc25B, and Cdc25C, which control cell cycle transitions by dephosphorylating cyclin-dependent kinases (3). CHK1 phosphorylates Cdc25C on serine-216 which creates a binding site for 14-3-3 protein and inhibits function of the phosphatase. Thus, in response to DNA damage, CHK1 phosphorylates and inhibits Cdc25C, thereby preventing the activation of the Cdc2-cyclin B complex and mitotic entry.

CHK1, Active recombinant protein - References

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