# abcam

## Product datasheet

## Recombinant human Cdc25A protein ab90763

### 1 References

描述

产品名称 重组人Cdc25A蛋白

生物活性 Activity: 1 nmol of Cdc25A will hydrolyze 10 nmol of pNPP per minute at 37°C at pH 8.0. Assay

buffer: 50 mM Tris-HCl, pH 8.0, 50 mM NaCl, 0.1 mM EDTA.

纯**度** > 90 % SDS-PAGE.

表达系统 Escherichia coli

Accession P30304

**蛋白长度** Full length protein

无动物成分 No

性质 Recombinant

种属 Human

**F列** ELGPEPPHRRLLFACSPPPASQPVVKALFGASAAGGLSPVT

NLTVTMDQ

LQGLGSDYEQPLEVKNNSNLQRMGSSESTDSGFCLDSPGPLD

SKENLENP

MRRIHSLPQKLLGCSPALKRSHSDSLDHDIFQLIDPDENKEN

**EAFEFKKP** 

 ${\tt VRPVSRGCLHSHGLQEGKDLFTQRQNSAPARMLSSNERDSSE}$ 

**PGNFIPLF** 

 ${\tt TPQSPVTATLSDEDDGFVDLLDGENLKNEEETPSCMASLWTA}$ 

PLVMRTTN

LDNRCKLFDSPSLCSSSTRSVLKRPERSQEESPPGSTKRRKS

MSGASPKE

 ${\tt STNPEKAHETLHQSLSLASSPKGTIENILDNDPRDLIGDFSK}$ 

**GYLFHTVA** 

GKHQDLKYISPEIMASVLNGKFANLIKEFVIIDCRYPYEYEG

**GHIKGAVN** 

LHMEEEVEDFLLKKPIVPTDGKRVIVVFHCEFSSERGPRMCR

YVRERDRL

GNEYPKLHYPELYVLKGGYKEFFMKCQSYCEPPSYRPMHHED

FKEDLKKF RTKSRTWAGEKSKREMYSRLKKL

Our Abpromise guarantee covers the use of ab90763 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用 Functional Studies

SDS-PAGE

形式 Liquid

#### 制备和贮存

稳**定性和存储** Shipped on dry ice. Upon delivery aliquot and store at -80℃. Avoid freeze / thaw cycles.

pH: 7.20

Constituents: 0.0308% DTT, 0.595% HEPES, 0.232% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

#### 常规信息

功能 Tyrosine protein phosphatase which functions as a dosage-dependent inducer of mitotic

progression. Directly dephosphorylates CDK1 and stimulates its kinase activity. Also

dephosphorylates CDK2 in complex with cyclin E, in vitro.

序列相似性 Belongs to the MPI phosphatase family.

Contains 1 rhodanese domain.

结**构域** The phosphodegron motif mediates interaction with specific F-box proteins when phosphorylated.

Putative phosphorylation sites at Ser-79 and Ser-82 appear to be essential for this interaction.

翻译后修饰 Phosphorylated by CHEK1 on Ser-76, Ser-124, Ser-178, Ser-279, Ser-293 and Thr-507 during

checkpoint mediated cell cycle arrest. Also phosphorylated by CHEK2 on Ser-124, Ser-279, and Ser-293 during checkpoint mediated cell cycle arrest. Phosphorylation on Ser-178 and Thr-507 creates binding sites for YWHAE/14-3-3 epsilon which inhibits CDC25A. Phosphorylation on Ser-76, Ser-124, Ser-178, Ser-279 and Ser-293 may also promote ubiquitin-dependent proteolysis of CDC25A by the SCF complex. Phosphorylation of CDC25A at Ser-76 by CHEK1 primes it for subsequent phosphorylation at Ser-79, Ser-82 and Ser-88 by NEK11. Phosphorylation by NEK11 is required for BTRC-mediated polyubiquitination and degradation. Phosphorylation by PIM1 leads to an increase in phosphatase activity. Phosphorylated by PLK3 following DNA damage,

leading to promote its ubiquitination and degradation.

Ubiquitinated by the anaphase promoting complex/cyclosome (APC/C) ubiquitin ligase complex that contains FZR1/CDH1 during G1 phase leading to its degradation by the proteasome. Ubiquitinated by a SCF complex containing BTRC and FBXW11 during S phase leading to its degradation by the proteasome. Deubiquitination by USP17L2/DUB3 leads to its stabilization.

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