



Rabbit Anti-Phospho-cdc25A (Ser124) antibody

SL5242R

Product Name:	Phospho-cdc25A (Ser124)
Chinese Name:	磷酸化细胞分裂周期蛋白25抗体
Alias:	cdc25A (Phospho-Ser124); cdc25A (Phospho Ser124); cdc25A (Phospho S124); Cdc 25a; CDC25A2; Cell division cycle 25 homolog A (S. pombe); Cell division cycle 25A; Cell division cycle 25A isoform a; Cell division cycle 25A isoform b; D9Ertd393e; Dual specificity phosphatase CDC25A; EC 3.1.3.48; M phase inducer phosphatase 1; MGC115549; CDC25A; CDC25A2 CAG isoform; M-phase inducer phosphatase 1; MPIP1 HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	59kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human cdc25A around the phosphorylation site of Ser124:SH(p-S)DS
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

CDC25A is a member of the CDC25 family of phosphatases. CDC25A is required for progression from G1 to the S phase of the cell cycle. It activates the cyclin-dependent kinase CDC2 by removing two phosphate groups. CDC25A is specifically degraded in response to DNA damage, which prevents cells with chromosomal abnormalities from progressing through cell division. CDC25A is an oncogene, although its exact role in oncogenesis has not been demonstrated. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Function:

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.

Subunit:

Interacts with CCNB1/cyclin B1. Interacts with YWHAE/14-3-3 epsilon when phosphorylated. Interacts with CUL1 specifically when CUL1 is neddylated and active. Interacts with BTRC/BTRCP1 and FBXW11/BTRCP2. Interactions with CUL1, BTRC and FBXW11 are enhanced upon DNA damage. Interacts with PIM1. Interacts with CHEK2; mediates CDC25A phosphorylation and degradation in response to infrared-induced DNA damages.

Post-translational modifications:

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.

Similarity:

Belongs to the MPI phosphatase family.
Contains 1 rhodanese domain.

SWISS:
P30304

Product Detail:

Gene ID:
993

Database links:

[Entrez Gene: 993](#)Human

[Entrez Gene: 12530](#)Mouse

[Entrez Gene: 171102](#)Rat

[Omim: 116947](#)Human

[SwissProt: P30304](#)Human

[SwissProt: P48964](#)Mouse

[SwissProt: P48965](#)Rat

[Unigene: 437705](#)Human

[Unigene: 307103](#)Mouse

[Unigene: 11390](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

CDC25家族的组成哺乳动物中CDC25家族一共包括3种同源异构体(CDC25A、CDC25B、CDC25C), 约有50%的序列同源, 是一组在细胞周期调控中发挥巨大作用的苏/酪氨酸双功能酶。不同的CDC25家族蛋白在细胞周期中的作用时相亦有差异, CDC25A和CDC25C分别在S期和M期发挥主要作用。