Rabbit Polyclonal antibody to Human CDC25A.

CPBT-51275RH   Rabbit(CDC25A)
Lot. No. (See product label)

PRODUCT INFORMATION

Product Overview
Rabbit Polyclonal antibody to Human CDC25A.

Antigen Description
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.

Target
CDC25A

Immunogen
A synthesized non-phosphopeptide derived from human Cdc25A around the phosphorylation site of serine 75.

Host
Rabbit

Isotype
IgG

Species
Human

Purification
Immunogen affinity purified

Applications
IHC-P, WB, ELISA

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

Domain
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.

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. 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.

PACKAGING

Format
Liquid

Buffer
Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS, 150mM Sodium chloride, pH 7.4

Storage
Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

ANTIGEN GENE INFORMATION

Gene Name
CDC25A cell division cycle 25 homolog A (S. pombe) [ Homo sapiens ]

Official Symbol
CDC25A
Synonyms  CDC25A; cell division cycle 25 homolog A (S. pombe); M-phase inducer phosphatase 1; Cdc 25a; CDC25A; CDC25A2; CDC25A2 CAG isoform; 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; M-phase inducer phosphatase 1; MGC115549; MPIP1_HUMAN; OTTHUMP00000164816; OTTHUMP00000164817; CDC25A2-CAG isoform; cell division cycle 25A; dual specificity phosphatase CDC25A; CDC25A2;

GenID  993

mRNA Refseq  NM_001789

Protein Refseq  NP_001780

Pathway  Activation of ATR in response to replication stress, organism-specific biosystem; Cell Cycle Checkpoints, organism-specific biosystem; Cell Cycle, Mitotic, organism-specific biosystem; Cell cycle, organism-specific biosystem; Cell cycle, organism-specific biosystem; Cell cycle, conserved biosystem; Cyclin A/B1 associated events during G2/M transition, organism-specific biosystem;

Function  hydrolase activity; protein binding; protein tyrosine phosphatase activity;

REFERENCES