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Product datasheet for TA326970S

CDC25A Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IHC, WB
Recommended Dilution:	WB: 1:500-1:2000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant protein of human CDC25A
Formulation:	PBS with 0.09% Sodium azide,50% glycerol,pH7.3.
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	cell division cycle 25A
Database Link:	NP_001780 Entrez Gene 12530 MouseEntrez Gene 171102 RatEntrez Gene 993 Human P30304

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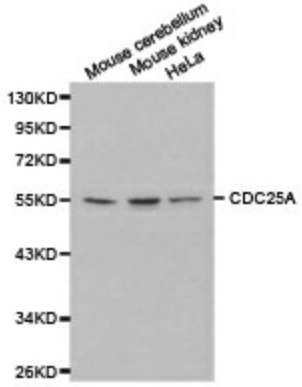
Background: The cdc25 protein phosphatase family plays a critical role in activating cyclin-dependent kinases (CDKs) via dephosphorylation of conserved Thr14/Tyr15 inhibitory phosphorylation sites. While cdc25C is primarily responsible for activating CDK1 to overcome the G2/M checkpoint and allow mitotic entry, the primary substrate of cdc25A is CDK2, which, when active, allows progression through the G1/S and intra-S checkpoints. Abundance, subcellular localization and activity of cdc25A is tightly controlled by a variety of mechanisms, including phosphorylation, ubiquitination, and inhibitory binding to 14-3-3 proteins. During normal cell cycle progression, elevated c-Myc and E2F transcription factor levels lead to increased cdc25A expression. When conditions are favorable for DNA synthesis, cdc25A and CDK2 form an activation loop, wherein each activates the other enzyme. DNA damage, on the other hand, leads to multisite phosphorylation at inhibitory sites (Ser123, Ser177, Ser278, Ser292, and Thr506) by Chk1 and Chk2, which result in 14-3-3 binding and ubiquitin-mediated degradation.

Synonyms: CDC25A2

Protein Families: Druggable Genome, Phosphatase

Protein Pathways: Cell cycle, Progesterone-mediated oocyte maturation

Product images:



Western blot analysis of extracts of various cell lines, using CDC25A antibody.