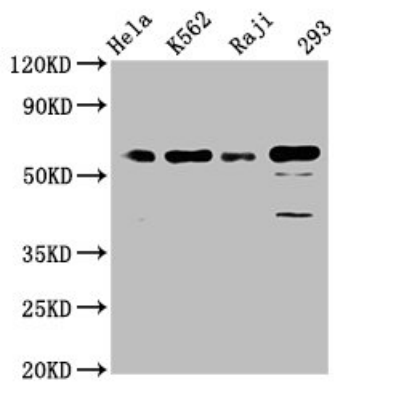
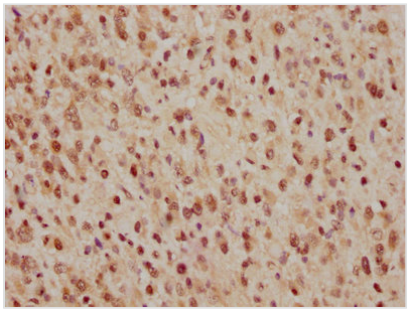
CDC25C Recombinant Monoclonal Antibody

Product Code	CSB-RA004996A0HU
Abbreviation	M-phase inducer phosphatase 3
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P30307
Immunogen	A synthesized peptide derived from human CDC25C
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IF, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200, IP:1:200-1:1000
Relevance	Functions as a dosage-dependent inducer in mitotic control. Tyrosine protein phosphatase required for progression of the cell cycle. When phosphorylated, highly effective in activating G2 cells into prophase. Directly dephosphorylates CDK1 and activates its kinase activity.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	M-phase inducer phosphatase 3, Dual specificity phosphatase Cdc25C, CDC25C
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	CDC25C
Clone No.	3E6

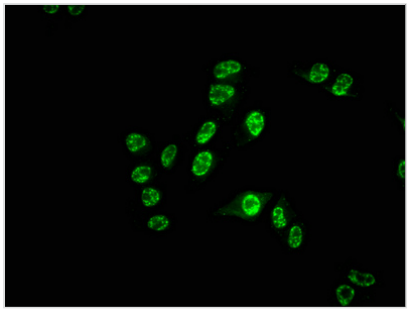
Image



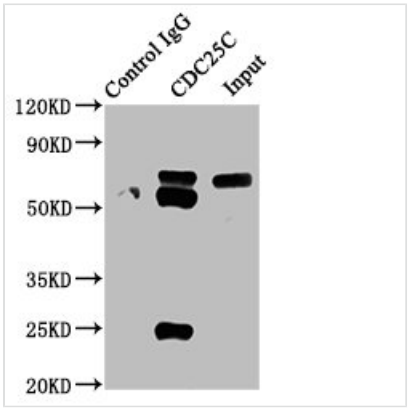
Western Blot
Positive WB detected in: Hela whole cell lysate, K562 whole cell lysate, Raji whole cell lysate, 293 whole cell lysate
All lanes: Cdc25C antibody at 1.65µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 54, 52, 49, 46 KDa
Observed band size: 60 KDa



IHC image of CSB-RA004996A0HU diluted at 1:165 and staining in paraffin-embedded human glioma cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence staining of Hela cells with CSB-RA004996A0HU at 1:55, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Immunoprecipitating CDC25C in HEK293 whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA004996A0HU in HEK293 whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
Lane 2: CSB-RA004996A0HU (3μg) + HEK293 whole cell lysate (500μg)
Lane 3: HEK293 whole cell lysate (20μg)

Description

The production of the CDC25C recombinant monoclonal antibody involves the use of DNA recombinant technology and in vitro genetic manipulation. Initially, animals are immunized with a synthesized peptide derived from human CDC25C, leading to the isolation of B cells. Positive B cells are then selected, followed by screening and identification of individual clones. PCR amplification is employed to amplify the light and heavy chains of the CDC25C antibody, which are subsequently inserted into a plasmid vector. This recombinant vector is transfected into a host cell line to facilitate the expression of the antibody. The CDC25C recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography. This antibody exhibits specificity towards human CDC25C protein and is recommended for five applications, including ELISA, WB, IHC, IF, and IP.

CDC25C is a protein phosphatase that plays a crucial role in the regulation of the cell cycle. Specifically, it activates CDK1, which is required for the G2/M transition. CDC25C dephosphorylates CDK1 at tyrosine 15, allowing it to become fully active and initiate mitosis. Additionally, CDC25C is regulated by a

number of upstream signaling pathways, including the checkpoint kinase 1 (CHK1) and checkpoint kinase 2 (CHK2) pathways, which activate CDC25C in response to DNA damage or other stressors. Its activity is tightly controlled to ensure proper cell division and prevent the development of cancer and other diseases.