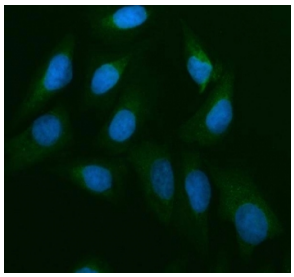
CDC25B Antibody / M-phase inducer phosphatase 2 (R32055)

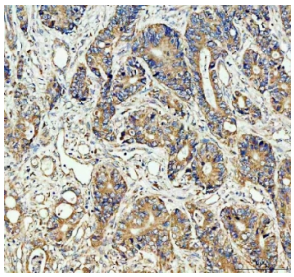
Catalog No.	Formulation	Size
R32055	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

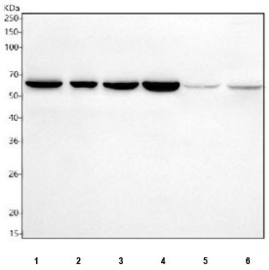
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P30305
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This CDC25B antibody is available for research use only.



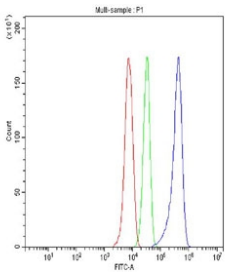
Immunofluorescent staining of FFPE human U-2 OS cells with CDC25B antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



IHC staining of FFPE human stomach cancer tissue with CDC25B antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of 1) human Jurkat, 2) human Raji, 3) human HeLa, 4) human HepG2, 5) rat liver and 6) mouse liver tissue lysate with CDC25B antibody. Expected/observed molecular weight: 61~67 kDa (isoforms 1-4).



Flow cytometry testing of fixed and permeabilized human HepG2 cells with CDC25B antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= CDC25B antibody.

Description

Central to the onset of mitosis in all eukaryotic cells is the CDC2 protein kinase, the activity of which is negatively regulated by phosphorylation and positively activated by dephosphorylation. The latter function is carried out by a specific phosphatase, CDC25. At least 3 human CDC25 genes code for the A, B, and C forms of CDC25. CDC25B is mapped to 20p13. P38 kinase has a critical role in the initiation of a G2 delay after ultraviolet radiation. Inhibition of p38 blocks the rapid initiation of this checkpoint in both human and murine cells after ultraviolet radiation. In vitro, p38 binds and phosphorylates CDC25B at serines 309 and 361, and CDC25C at serine-216; phosphorylation of these residues is required for binding to 14-3-3 proteins. In vivo, inhibition of p38 prevents both phosphorylation of CDC25B at serine-309 and 14-3-3 binding after ultraviolet radiation, and mutation of this site is sufficient to inhibit the checkpoint initiation. Regulation of CDC25B phosphorylation by p38 is a critical event for initiating the G2/M checkpoint after ultraviolet radiation.

Application Notes

Optimal dilution of the CDC25B antibody should be determined by the researcher.

Immunogen

Amino acids 119-248 of human CDC25B were used as the immunogen for the CDC25B antibody.

Storage

After reconstitution, the CDC25B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.