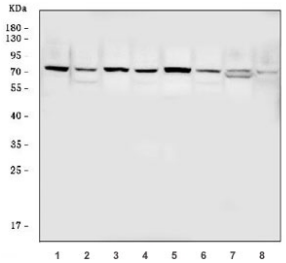
M-phase inducer phosphatase 2 Antibody / CDC25B (RQ7156)

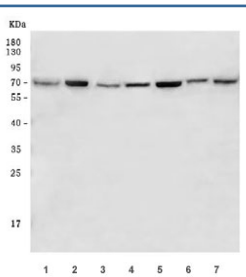
Catalog No.	Formulation	Size
RQ7156	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

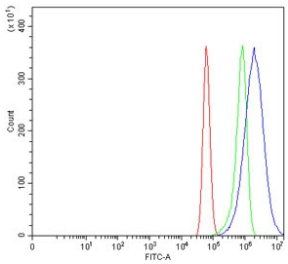
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P30305
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This M-phase inducer phosphatase 2 antibody is available for research use only.



Western blot testing of 1) rat liver, 2) rat brain, 3) rat kidney, 4) rat testis, 5) mouse liver, 6) mouse brain, 7) mouse kidney and 8) mouse testis tissue lysate with M-phase inducer phosphatase 2 antibody. Expected molecular weight: 61~67 kDa (isoforms 1-4).



Western blot testing of human 1) 293T, 2) Caco-2, 3) MOLT4, 4) Raji, 5) HeLa, 6) HaCaT and 7) SiHa cell lysate with M-phase inducer phosphatase 2 antibody. Expected molecular weight: 61~67 kDa (isoforms 1-4).



Flow cytometry testing of human U-87 MG cells with M-phase inducer phosphatase 2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= M-phase inducer phosphatase 2 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 M-phase inducer phosphatase 2 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-H486) was used as the immunogen for the M-phase inducer phosphatase 2 antibody.

Storage

After reconstitution, the M-phase inducer phosphatase 2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.