CDC25B Recombinant Monoclonal Antibody

Product Code	CSB-RA004995A0HU
Abbreviation	M-phase inducer phosphatase 2
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P30305
Immunogen	A synthesized peptide derived from human CDC25B
Species Reactivity	Human
Tested Applications	ELISA
Relevance	Tyrosine protein phosphatase which functions as a dosage-dependent inducer of mitotic progression. Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner. Directly dephosphorylates CDK1 and stimulates its kinase activity. The three isoforms seem to have a different level of 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 2, Dual specificity phosphatase Cdc25B, CDC25B, CDC25HU2
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	CDC25B
Clone No.	3D6
Description	The CDC25B recombinant monoclonal antibody is produced using DNA recombinant technology and in vitro genetic manipulation. It involves immunizing animals with a synthesized peptide derived from human CDC25B to isolate B cells and select positive B cells. These positive B cells undergo screening and identification of individual clones. The light and heavy chains of the CDC25B antibody are then amplified using PCR and inserted into a plasmid vector. This recombinant vector is transfected into a host cell line for antibody expression. The CDC25B recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography. It specifically binds to human CDC25B protein and is recommended for ELISA. CDC25B is a phosphatase enzyme that plays a critical role in the regulation of

the cell cycle. Its main function is to activate the CDK complexes that drive the progression of the cell cycle through the G2/M checkpoint. This activation occurs by dephosphorylating specific residues on the CDK complexes, which allows them to bind to and phosphorylate their target substrates, leading to mitosis and cell division. CDC25B also plays a role in DNA damage response and repair. It can be activated in response to DNA damage, leading to increased cell cycle arrest and DNA repair mechanisms.