Human/Mouse/Rat CDC25A Antibody

Monoclonal Mouse IgG_{2B} Clone # 336445

Catalog Number: MAB1648

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat CDC25A in direct ELISAs and Western blots. In direct ELISA and Western blots, this antibody does not cross-react with recombinant human (rh) CDC25B or rhCDC25C.
Source	Monoclonal Mouse IgG_{2B} Clone # 336445
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human CDC25A Glu2-Leu523 Accession # AAA58415
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

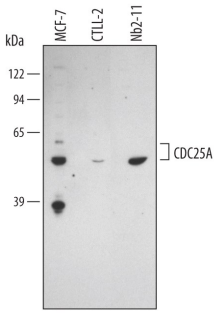
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	Immersion fixed paraffin-embedded sections of human breast cancer tissue

DATA

Western Blot



Detection of Human/Mouse/Rat CDC25A by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, CTLL-2 mouse cytotoxic T cell line, and Nb2-11 rat lymphoma cell line. PVDF membrane was probed with 1 µg/mL of Human/Mouse/Rat CDC25A Monoclonal Antibody (Catalog # MAB1648) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Specific bands were detected for CDC25A at approximately 55-60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Cell Division Cycle 25A (CDC25A) phosphatase removes inorganic phosphate groups covalently attached to tyrosine, serine and threonine residues in proteins (1). Overexpression of CDC25A in small mammary carcinomas has been associated with a poor patient survival prognosis (2). Levels of CDC25A activity are highest in S phase of the cell cycle, where it is suspected to be involved in “checkpoint” control of cell cycle progression (3). Induction of DNA damage with ultraviolet or ionizing radiation causes an increase in CDC25A ubiquinylation and proteosomal degradation, leading to cell cycle block between G1 and S phases (4). One of its major substrates, the kinase CDC2, is activated by dephosphorylation (5). Recombinant CDC25A is truncated to remove the N-terminal regulatory domains and is fully active.

References:

1. Draetta, G. and J. Eckstein (1997) Biochim. Biophys. Acta. **1332**:M53.
2. Cangi, M. *et al.* (2000) J. Clin. Invest. **106**:753.
3. Hoffmann, I. *et al.* (1995) EMBO J. **13**:4302.
4. Sagata, N. (2002) Science **298**:1905.
5. Gautier, J. *et al.* (1991) Cell **67**:197.

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