

Product Information

MONOCLONAL ANTI-CDC25A CLONE DCS121

Purified Mouse Immunoglobulin

Product Number **C 9479**

Product Description

Monoclonal Anti-CDC25A (mouse IgG2a isotype) is produced by immunizing mice with purified recombinant human CDC25. The antibody is purified from ascites fluid using protein A affinity chromatography.

Monoclonal Anti-CDC25A recognizes human CDC25A by various immunochemical techniques including immunoblotting and immunoprecipitation.

CDC25 proteins are a three-member family of dual specific protein phosphatases that share 40% identity in their carboxyterminal sequence.¹ These proteins have important functions in cell cycle regulation.^{2, 3, 4} CDC25A, a 523 amino acid protein with a molecular mass of 58,796,¹ is required for S phase entry in human cells.³ In the cell cycle of eukaryotes, the M phase is initiated by a maturation promoting factor (MPF)^{5, 6} which is a protein kinase complex consisting of p34^{cdc2}, cyclin B, and p13. The activity of this complex is controlled by multiple levels of phosphorylation and dephosphorylation of the catalytic p34^{cdc2} component. CDC25A and CDC25B are p34^{cdc2} tyrosine phosphatases. Dephosphorylation of p34^{cdc2} by the CDC25 proteins activates the MPF complex and initiates mitosis.

Although expressed throughout the cell cycle, peak expression of CDC25A occurs in G₁. CDC25A is widely expressed in most tissues and normally expressed at low levels in most quiescent cells. Overexpression of the CDC25 family members has been observed in various tumors, particularly gastric tumors.

Reagent

Monoclonal Anti-CDC25A is supplied as 1 mg/ml of antiserum in phosphate buffered saline, pH 7.4, containing 0.08% sodium azide.

Storage/Stability

For continuous use, store at 2 °C to 8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing. Do not store in a frost-free freezer. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Product Profile

For immunoblotting, a working concentration of 1 to 5 µg/ml is recommended. A band of approximately 65 kDa is detected.

For immunoprecipitation, a working concentration of 1 to 10 µg/ml is recommended.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentrations by titration test.

References

1. Galaktionov, L., and Beach, D., *Cell*, **67**, 1181-1194 (1991).
2. Garner-Hamrick, P.A., and Fisher, C., *Int. J. Cancer*, **76**, 720-728 (1998).
3. Gasparotto, D., et al., *Cancer Res.*, **57**, 2366-2368 (1997).
4. Fauman, E.B., et al., *Cell*, **93**, 617-625 (1998).
5. Murray, A.W., and Kirschner, M.W., *Science*, **246**, 614-621 (1989).
6. Doree, M., *Curr. Opin. Cell Biol.*, **2**, 269-273 (1990).

KAA 06/01

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.