

Product Information

Anti-Cdh1 antibody, Mouse monoclonal
clone DCS-266, purified from hybridoma cell culture

Catalog Number **C7855**

Product Description

Monoclonal Anti-Cdh1 (mouse IgG1 isotype) is derived from the DCS-266 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with a recombinant human Cdh1. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Catalog Number ISO2).

Monoclonal Anti-Cdh1 reacts specifically with human Cdh1. The product is useful in immunoblotting (a single or doublet band at ~50 kDa) and in immunoprecipitation.

Regulation of cell cycle progression in eukaryotic cells depends on the expression of proteins called cyclins. Mitotic cyclins are subject to stage-specific degradation by ubiquitin-dependent pathways. Anaphase-promoting complex/cyclosome (APC) functions as a cell cycle-regulated ubiquitin ligase that mediates destruction of cell cycle regulatory factors by the proteasomes during mitosis.

APC is activated at metaphase-anaphase transition and remains active until late G₁ phase.¹ APC activity is regulated by at least four distinct mechanisms, including an activation by Cdc20/p55CDC/Fizzy (Cdc20) and Cdh1/Hct1/Fizzy-related (Cdh1) in a substrate-specific manner.²⁻⁴ Cdc20 and Cdh1 ensure that different substrates of the APC are degraded at the right time during M and G₁ phases. Cdc20 targets APC substrates whose degradation is required for the metaphase-anaphase transition (such as Pds1) for degradation, whereas Cdh1 may trigger destruction of substrates whose degradation is important for exit from M phase (such as mitotic cyclins and Ase1).²

The timing of APC activation is regulated by the phosphorylation of Cdh1 and Cdc20, by Cdc2-cyclin B (MPF).⁵ Also, an E2F-dependent, cyclin A/Cdk2-mediated phosphorylation of Cdh1 prevents the activatory assembly of Cdh1 with APC, thus creating an environment permissive for accumulation of APC targets.⁶

A monoclonal antibody reacting specifically with Cdh1 is an essential tool in defining the interactions and distributions of Cdh1, and its function in the regulation of cell cycle.

Reagent

Monoclonal Anti-Cdh1 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~2 mg/ml

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. 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.

Product Profile

A working concentration of 2 to 4 µg/ml is determined by immunoblotting using HeLa cells nuclear extract.

Note: In order to obtain the best results using various techniques and preparations, it is recommended to determine optimal working dilutions by titration test.

References

1. Amon, A., et al., *Cell*, **77**, 1037-1050 (1994).
2. Vinstin, R., et al., *Science*, **278**, 460-463 (1997).
3. Schwab, M., et al., *Cell*, **90**, 683-693 (1997).
4. Fang, G., et al., *Mol. Cell*, **2**, 163-171 (1998).
5. Kotani, S., et al., *J. Cell Biol.*, **146**, 791-800 (1999).
6. Lukas, C., et al., *Nature*, **401**, 815-818 (1999).

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