

Dbf4 (H-300): sc-11354

BACKGROUND

The Dbf4/Cdc7 protein kinase is essential for the activation of replication origins during S phase. Cdc7-Dbf4 efficiently phosphorylates several proteins that are required for the initiation of DNA replication, including five of the six minichromosome maintenance (Mcm) proteins and the p180 subunit of DNA polymerase α -primase. This protein complex consists of the catalytic subunit Cdc7 associating with the regulatory and activating subunit Dbf4, and the kinase activity of the complex is regulated throughout the cell cycle mainly by fluctuating levels of Dbf4. Cdc7 is consistently expressed throughout the cell cycle, while the expression of Dbf4 is absent during G₁ phase and accumulates during S and G₂ phases. The anaphase-promoting complex rapidly degrades Dbf4 at the time of chromosome segregation, and the stability of Dbf4 remains low during pre-Start G₁ phase. The coordinated degradation of Dbf4 and the time of chromosome separation is important to ensuring that prereplicative complexes, which assemble after chromosome segregation, do not immediately refire.

CHROMOSOMAL LOCATION

Genetic locus: DBF4 (human) mapping to 7q21.12; Dbf4 (mouse) mapping to 5 A1.

SOURCE

Dbf4 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Dbf4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dbf4 (H-300) is recommended for detection of Dbf4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Dbf4 (H-300) is also recommended for detection of Dbf4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Dbf4 siRNA (h): sc-37605, Dbf4 siRNA (m): sc-37606, Dbf4 shRNA Plasmid (h): sc-37605-SH, Dbf4 shRNA Plasmid (m): sc-37606-SH, Dbf4 shRNA (h) Lentiviral Particles: sc-37605-V and Dbf4 shRNA (m) Lentiviral Particles: sc-37606-V.

Molecular Weight of Dbf4: 77 kDa.

Positive Controls: Sol8 nuclear extract: sc-2157, PC-3 nuclear extract: sc-2152 or SW480 nuclear extract: sc-2155.

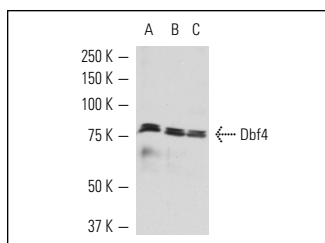
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Dbf4 (H-300): sc-11354. Western blot analysis of Dbf4 expression in Sol8 (A), PC-3 (B) and SW480 (C) nuclear extracts.

SELECT PRODUCT CITATIONS

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- Burd, C.J., et al. 2005. Cyclin D1 binding to the androgen receptor (AR) NH₂-terminal domain inhibits activation function 2 association and reveals dual roles for AR corepression. *Mol. Endocrinol.* 19: 607-620.
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Try **Dbf4 (6G9): sc-293398**, our highly recommended monoclonal alternative to Dbf4 (H-300).