PR48 (h3): 293T Lysate: sc-116791



The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions. The protein phosphatase (PP) holoenzyme is a trimeric complex composed of a regulatory subunit, a variable subunit and a catalytic subunit. PR48 is a regulatory subunit of protein phosphatase 2A (PP2A). PP2A activity is required for the initiation of DNA replication in yeast, viral, and vertebrate systems. PR48 localizes to the nucleus and binds specifically to Cdc6, a highly conserved protein which is required for the formation of prereplicative complexes. PR48 is considered to be involved in the dephosphorylation of Cdc6 by PP2A, a process important to the control of DNA replication in mammalian cell.

REFERENCES

- Mumby, M.C., et al. 1993. Protein serine/threonine phosphatases: structure, regulation, and functions in cell growth. Physiol. Rev. 73: 673-699.
- Wera, S., et al. 1995. Serine/threonine protein phosphatases. Biochem. J. 311: 17-29.
- Lin, F.C., et al. 1995. The role of Saccharomyces cerevisiae type 2A phosphatase in the Actin cytoskeleton and in entry into mitosis. EMBO J. 14: 2745-2759.
- 4. Gavin, K.A., et al. 1995. Conserved initiator proteins in eukaryotes. Science 270: 1667-1671.
- Coleman, T.R., et al. 1996. The Xenopus Cdc6 protein is essential for the initiation of a single round of DNA replication in cell-free extracts. Cell 87: 53-63.
- Yan, Z., et al. 1998. Cdc6 is regulated by E2F and is essential for DNA replication in mammalian cells. Proc. Natl. Acad. Sci. USA 95: 3603-3608.
- Lin, X.H., et al. 1998. Protein phosphatase 2A is required for the initiation of chromosomal DNA replication. Proc. Natl. Acad. Sci. USA 95: 14693-14698.
- Yan, Z., et al. 2000. PR48, a novel regulatory subunit of protein phosphatase 2A, interacts with Cdc6 and modulates DNA replication in human cells. Mol. Cell. Biol. 20: 1021-1029.

CHROMOSOMAL LOCATION

Genetic locus: PPP2R3B (human) mapping to Xp22.33/Yp11.32.

PRODUCT

PR48 (h3): 293T Lysate represents a lysate of human PR48 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PR48 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive PR48 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com