SANTA CRUZ BIOTECHNOLOGY, INC.

Sds22 (E-10): sc-514830



BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases. In general, the protein phosphatase 1 (PP1) holoenzyme is a trimeric complex composed of a regulatory subunit, a variable subunit, and a catalytic subunit. Sds22, also known as PPP1R7 (protein phosphatase 1, regulatory (inhibitor) subunit 7), is a 360 amino acid protein that localizes to the nucleus and contains ten LRR (leucine rich) repeats. Expressed in a variety of tissues, Sds22 functions as a regulatory subunit of the PP1 complex, suggesting a role in protein regulation throughout the cell. Multiple isoforms of Sds22 exist due to alternative splicing events.

REFERENCES

- 1. Renouf, S., et al. 1995. Molecular cloning of a human polypeptide related to yeast Sds22, a regulator of protein phosphatase-1. FEBS Lett. 375: 75-78.
- 2. Online Mendelian Inheritance in Man, OMIM[™]. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602877. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Ceulemans, H., et al. 1999. Structure and splice products of the human gene encoding Sds22, a putative mitotic regulator of protein phosphatase-1. Eur. J. Biochem. 262: 36-42.
- 4. Ceulemans, H., et al. 2002. Binding of the concave surface of the Sds22 superhelix to the $\alpha 4/\alpha 5/\alpha 6$ -triangle of protein phosphatase-1. J. Biol. Chem. 277: 47331-47337.
- Tran, H.T., et al. 2002. Detection of multiple splice variants of the nuclear protein phosphatase 1 regulator Sds22 in rat liver nuclei. Biochem. Cell Biol. 80: 811-815.
- Lesage, B., et al. 2007. A complex of catalytically inactive protein phosphatase-1 sandwiched between Sds22 and inhibitor-3. Biochemistry 46: 8909-8919.

CHROMOSOMAL LOCATION

Genetic locus: PPP1R7 (human) mapping to 2q37.3; Ppp1r7 (mouse) mapping to 1 D.

SOURCE

Sds22 (E-10) is a mouse monoclonal antibody raised against amino acids 61-214 mapping within an internal region of Sds22 of human origin.

PRODUCT

Each vial contains 200 μg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Sds22 (E-10) is recommended for detection of Sds22 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Sds22 siRNA (h): sc-94837, Sds22 siRNA (m): sc-153290, Sds22 shRNA Plasmid (h): sc-94837-SH, Sds22 shRNA Plasmid (m): sc-153290-SH, Sds22 shRNA (h) Lentiviral Particles: sc-94837-V and Sds22 shRNA (m) Lentiviral Particles: sc-153290-V.

Molecular Weight of Sds22: 44 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, HeLa whole cell lysate: sc-2200 or rat testis extract: sc-2400.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG K BP-FITC: sc-516140 or m-IgG K BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





Sds22 (E-10): sc-514830. Western blot analysis of Sds22 expression in Neuro-2A whole cell lysate (A) and rat testis tissue extract (B). Sds22 (E-10): sc-514830. Western blot analysis of Sds22 expression in IMR-32 nuclear extract (A) and HeLa whole cell lysate (B).

RESEARCH USE

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

PROTOCOLS

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