

# Sds22 (B-8): sc-398865

## 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

- 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.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 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.
- 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.

## SOURCE

Sds22 (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 58-87 within an internal region of Sds22 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398865 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Sds22 (B-8) is recommended for detection of Sds22 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 shRNA Plasmid (h): sc-94837-SH and Sds22 shRNA (h) Lentiviral Particles: sc-94837-V.

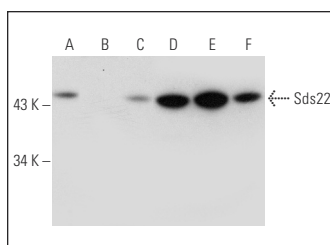
Molecular Weight of Sds22: 44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, IMR-32 cell lysate: sc-2409 or K-562 nuclear extract: sc-2130.

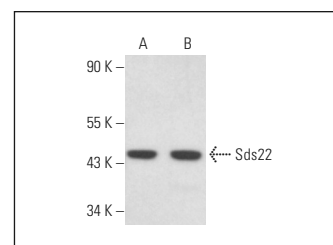
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Sds22 (B-8): sc-398865. Western blot analysis of Sds22 expression in K-562 nuclear extract (A) and c4 (B), PC-3 (C), K-562 (D), IMR-32 (E) and HeLa (F) whole cell lysates. Note lack of reactivity with mouse Sds22 in lane B.



Sds22 (B-8): sc-398865. Western blot analysis of Sds22 expression in IMR-32 (A) and HL-60 (B) whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.