

SPEN (H-300): sc-98675

BACKGROUND

SPEN, also known as MINT, SHARP or RBM15C, is a 3,664 amino acid protein that localizes to the nucleus and contains one RID domain, one SPOC domain and 4 RRM domains. Expressed at high levels in spleen, testis, brain and thymus, SPEN interacts with several proteins, including Msx-2, SMRTe, HDAC1 and HDAC2, and functions as a corepressor that is thought to negatively regulate the Notch signaling pathway. SPEN, which is functionally induced by 17- β Estradiol and is subject to DNA damage-dependent phosphorylation, may also block the differentiation of precursor B cells into marginal zone B cells. The gene encoding SPEN maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

- Newberry, E.P., et al. 1999. The RRM domain of MINT, a novel Msx-2 binding protein, recognizes and regulates the rat osteocalcin promoter. *Biochemistry* 38: 10678-10690.
- Shi, Y., et al. 2001. SHARP, an inducible cofactor that integrates nuclear receptor repression and activation. *Genes Dev.* 15: 1140-1151.
- Oswald, F., et al. 2002. SHARP is a novel component of the Notch/RBP-Jk signalling pathway. *EMBO J.* 21: 5417-5426.
- Shi, Y., et al. 2002. The peroxisome proliferator-activated receptor δ , an integrator of transcriptional repression and nuclear receptor signaling. *Proc. Natl. Acad. Sci. USA* 99: 2613-2618.
- Ariyoshi, M. and Schwabe, J.W. 2003. A conserved structural motif reveals the essential transcriptional repression function of SPEN proteins and their role in developmental signaling. *Genes Dev.* 17: 1909-1920.
- Vadlamudi, R.K., et al. 2005. An essential role of Pak1 phosphorylation of SHARP in Notch signaling. *Oncogene* 24: 4591-4596.

CHROMOSOMAL LOCATION

Genetic locus: SPEN (human) mapping to 1p36.21; Spen (mouse) mapping to 4 E1.

SOURCE

SPEN (H-300) is a rabbit polyclonal antibody raised against amino acids 3365-3664 mapping at the C-terminus of SPEN 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-98675 X, 200 μ g/0.1 ml.

RESEARCH USE

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

APPLICATIONS

SPEN (H-300) is recommended for detection of SPEN 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).

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

Suitable for use as control antibody for SPEN siRNA (h): sc-76556, SPEN siRNA (m): sc-76557, SPEN shRNA Plasmid (h): sc-76556-SH, SPEN shRNA Plasmid (m): sc-76557-SH, SPEN shRNA (h) Lentiviral Particles: sc-76556-V and SPEN shRNA (m) Lentiviral Particles: sc-76557-V.

SPEN (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

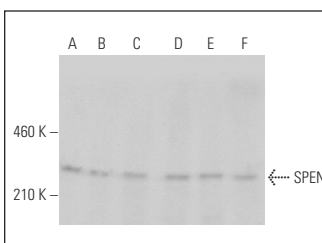
Molecular Weight of SPEN: 400 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, human liver extract: sc-363766 or human tonsil tissue extract: sc-364263.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SPEN (H-300): sc-98675. Western blot analysis of SPEN expression in HeLa (A) and Jurkat (B) nuclear extracts, human liver (C) and human tonsil (D) tissue extracts and Jurkat (E) and BC₃H1 (F) 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.