

SPEN (N-19): sc-79097

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

1. 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.
2. Shi, Y., et al. 2001. SHARP, an inducible cofactor that integrates nuclear receptor repression and activation. *Genes Dev.* 15: 1140-1151.
3. Oswald, F., et al. 2002. SHARP is a novel component of the Notch/RBP-Jk signalling pathway. *EMBO J.* 21: 5417-5426.
4. 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.
5. 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.
6. 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 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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.

Blocking peptide available for competition studies, sc-79097 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-79097 X, 200 μ g/0.1 ml.

APPLICATIONS

SPEN (N-19) 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), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (N-19) is also recommended for detection of SPEN in additional species, including equine, bovine and avian.

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.

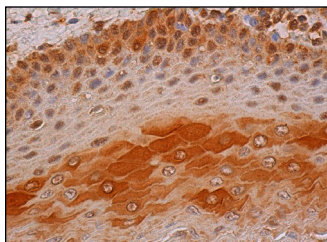
SPEN (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SPEN: 400 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



SPEN (N-19): sc-79097. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear and cytoplasmic staining of squamous epithelial cells.

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.