

symplekin (YI-9): sc-101128

BACKGROUND

Symplekin, also known as SYMPK, SPK or SYM, is a regulatory protein that localizes to the nucleus, cytoplasm, cytoskeleton and cell junction. Expressed in a variety of tissues including testis, pancreas, stomach, liver and fetal brain, symplekin functions to mediate polyadenylation events and promote gene expression. Symplekin is thought to form a high molecular weight complex (called the tight junction complex) with proteins that are involved in polyadenylation and, once in this complex, may serve as a scaffold that recruits regulatory proteins to polyadenylation sites. In addition, symplekin functions independently and plays a role in the 3'-end maturation of histone mRNAs. Defects in the gene encoding symplekin are associated with hepatocellular carcinoma, suggesting a possible role for symplekin in tumor formation. Symplekin is expressed as two isoforms due to alternative splicing events.

REFERENCES

1. Keon, B.H., et al. 1996. Symplekin, a novel type of tight junction plaque protein. *J. Cell Biol.* 134: 1003-1018.
2. Ueki, K., et al. 1997. Chromosomal localization to 19q13.3, partial genomic structure and 5' cDNA sequence of the human symplekin gene. *Somat. Cell Mol. Genet.* 23: 229-231.
3. Takagaki, Y. and Manley, J.L. 2000. Complex protein interactions within the human polyadenylation machinery identify a novel component. *Mol. Cell. Biol.* 20: 1515-1525.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602388. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Langbein, L., et al. 2003. Tight junction-related structures in the absence of a lumen: occludin, claudins and tight junction plaque proteins in densely packed cell formations of stratified epithelia and squamous cell carcinomas. *Eur. J. Cell Biol.* 82: 385-400.
6. Barnard, D.C., et al. 2004. Symplekin and xGLD-2 are required for CPEB-mediated cytoplasmic polyadenylation. *Cell* 119: 641-651.

CHROMOSOMAL LOCATION

Genetic locus: SYMPK (human) mapping to 19q13.32; Sympk (mouse) mapping to 7 A3.

SOURCE

symplekin (YI-9) is a mouse monoclonal antibody raised against recombinant symplekin of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml 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

symplekin (YI-9) is recommended for detection of symplekin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for symplekin siRNA (h): sc-97297, symplekin siRNA (m): sc-153972, symplekin shRNA Plasmid (h): sc-97297-SH, symplekin shRNA Plasmid (m): sc-153972-SH, symplekin shRNA (h) Lentiviral Particles: sc-97297-V and symplekin shRNA (m) Lentiviral Particles: sc-153972-V.

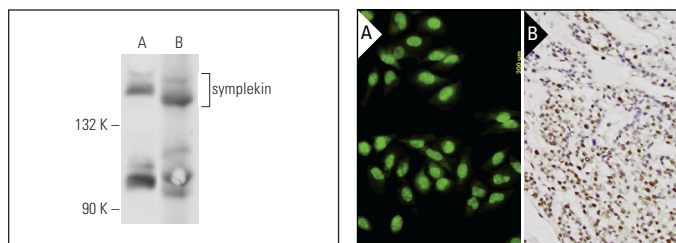
Molecular Weight of symplekin: 150 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



symplekin (YI-9): sc-101128. Western blot analysis of symplekin expression in 293T (A) and HeLa (B) whole cell lysate.

symplekin (YI-9): sc-101128. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human ovary, clear cell carcinoma tissue showing nuclear localization (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.