

# symplekin (S-16): sc-240937

## 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., et al. 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<sup>™</sup>. 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.
7. Kolev, N.G., et al. 2005. Symplekin and multiple other polyadenylation factors participate in 3'-end maturation of histone mRNAs. *Genes Dev.* 19: 2583-2592.

## CHROMOSOMAL LOCATION

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

## SOURCE

symplekin (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of symplekin of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240937 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

symplekin (S-16) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

symplekin (S-16) is also recommended for detection of symplekin in additional species, including equine, canine, bovine and porcine.

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.

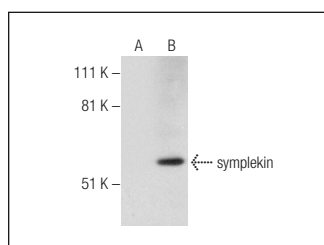
Molecular Weight of symplekin: 150 kDa.

Positive Controls: symplekin (h): 293T Lysate: sc-114051, COLO 320 HSR whole cell lysate or HeLa whole cell lysate: sc-2200.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



symplekin (S-16): sc-240937. Western blot analysis of symplekin expression in non-transfected: sc-117752 (A) and human symplekin transfected: sc-114051 (B) 293T 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.