SANTA CRUZ BIOTECHNOLOGY, INC.

symplekin (H-300): sc-135410

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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™. 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. Xing, H., et al. 2004. HSF1 modulation of Hsp70 mRNA polyadenylation via interaction with symplekin. J. Biol. Chem. 279: 10551-10555.

CHROMOSOMAL LOCATION

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

SOURCE

symplekin (H-300) is a rabbit polyclonal antibody raised against amino acids 517-816 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.

APPLICATIONS

symplekin (H-300) 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).

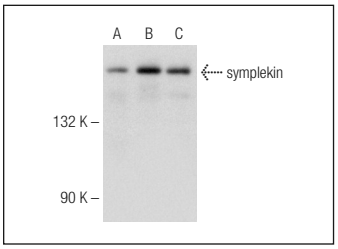
symplekin (H-300) is also recommended for detection of symplekin in additional species, including canine, bovine and porcine.

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.

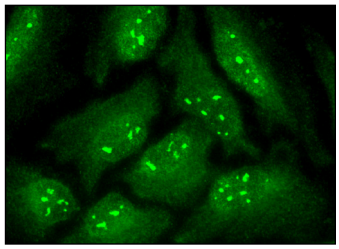
Molecular Weight of symplekin: 150 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

DATA



symplekin (H-300): sc-135410. Western blot analysis of symplekin expression in Jurkat (**A**), K-562 (**B**) and Caco-2 (**C**) whole cell lysates.



symplekin (H-300): sc-135410. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear bodies and cytoplasmic localization.

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 or our catalog for detailed protocols and support products.