

symplekin (G-6): sc-398897

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.

CHROMOSOMAL LOCATION

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

SOURCE

symplekin (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 192-215 within an internal region of symplekin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

symplekin (G-6) is available conjugated to agarose (sc-398897 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398897 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398897 PE), fluorescein (sc-398897 FITC), Alexa Fluor® 488 (sc-398897 AF488), Alexa Fluor® 546 (sc-398897 AF546), Alexa Fluor® 594 (sc-398897 AF594) or Alexa Fluor® 647 (sc-398897 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398897 AF680) or Alexa Fluor® 790 (sc-398897 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398897 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

symplekin (G-6) is recommended for detection of symplekin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

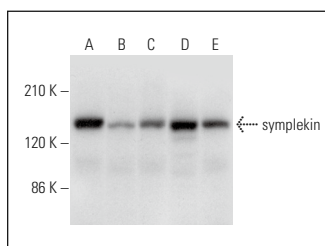
Molecular Weight of symplekin: 150 kDa.

Positive Controls: symplekin (h): 293T Lysate: sc-114051, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

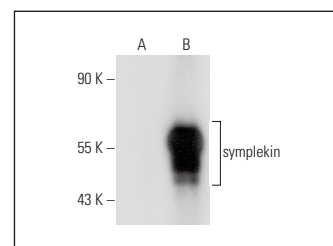
RECOMMENDED SUPPORT REAGENTS

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.

DATA



symplekin (G-6): sc-398897. Western blot analysis of symplekin expression in K-562 (A), Jurkat (B), Colo-2 (C), COLO 320DM (D) and MCF7 (E) whole cell lysates.



symplekin (G-6): sc-398897. Western blot analysis of symplekin expression in non-transfected: sc-117752 (A) and human symplekin transfected: sc-114051 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, H., et al. 2022. Targeting the mRNA endonuclease CPSF73 inhibits breast cancer cell migration, invasion, and self-renewal. *iScience* 25: 104804.

RESEARCH USE

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