

# SYT (A-10): sc-365170

## BACKGROUND

The transcriptional coactivator SYT (synovial translocation protein) contains a conserved amino terminal SNH domain and a carboxy terminal QPGY domain, which is a functioning transcriptional activating sequence. Synovial sarcoma translocation (SSX) proteins, including SSX1-5, are transcriptional repressors that contain a repressor domain in their carboxy termini. SSX proteins are localized to the nucleus and expressed in testis and several types of cancers and, therefore, they are classified as C/T (cancer/testis) antigens. The t(x;18) translocation results in the fusion of the amino terminus of SYT to the carboxy terminus of either SSX1 or SSX2; both fusions result in the production of transcriptional activators. SYT-SSX chimeras are detected in most synovial sarcomas. Synovial sarcomas are responsible for up to 10% of soft tissue sarcomas and are histologically characterized as either biphasic or monophasic. Genetic analysis indicates that biphasic synovial sarcomas contain SYT-SSX1 fusions, whereas SYT-SSX2 fusions are found in monophasic synovial sarcomas, providing additional distinguishing characterization of these subtypes.

## REFERENCES

- Clark, J., et al. 1994. Identification of novel genes, SYT and SSX, involved in the t(X;18)(p11.2;q11.2) translocation found in human synovial sarcoma. *Nat. Genet.* 7: 502-508.
- Crew, A.J., et al. 1995. Fusion of SYT to two genes, SSX1 and SSX2, encoding proteins with homology to the Krüppel-associated box in human synovial sarcoma. *EMBO J.* 14: 2333-2340.
- Gure, A.O., et al. 1997. SSX: a multigene family with several members transcribed in normal testis and human cancer. *Int. J. Cancer* 72: 965-971.
- dos Santos, N.R., et al. 1997. Nuclear localization of SYT, SSX and the synovial sarcoma-associated SYT-SSX fusion proteins. *Hum. Mol. Genet.* 6: 1549-1558.
- Tureci, O., et al. 1998. Expression of SSX genes in human tumors. *Int. J. Cancer* 77: 19-23.

## CHROMOSOMAL LOCATION

Genetic locus: SS18 (human) mapping to 18q11.2, SS18L1 (human) mapping to 20q13.33.

## SOURCE

SYT (A-10) is a mouse monoclonal antibody raised against amino acids 1-80 mapping at the N-terminus of SYT of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-365170 X, 200 µg/0.1 ml.

## STORAGE

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

## APPLICATIONS

SYT (A-10) is recommended for detection of SYT and CREST of 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).

SYT (A-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

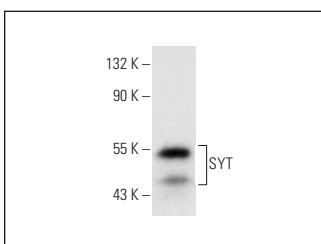
Molecular Weight of SYT: 54 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or HeLa nuclear extract: sc-2120.

## 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



SYT (A-10): sc-365170. Western blot analysis of SYT expression in IMR-32 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Carmody Soni, E.E., et al. 2014. Loss of SS18-SSX1 inhibits viability and induces apoptosis in synovial sarcoma. *Clin. Orthop. Relat. Res.* 472: 874-882.
- Kawano, S., et al. 2016. Preclinical evidence of anti-tumor activity induced by EZH2 inhibition in human models of synovial sarcoma. *PLoS ONE* 11: e0158888.
- Mashtalir, N., et al. 2018. Modular organization and assembly of SWI/SNF family chromatin remodeling complexes. *Cell* 175: 1272-1288.e20.

## RESEARCH USE

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