

SYT (E-5): sc-374299

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 mono-phasic. 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.
- Kawai, A., et al. 1998. SYT-SSX gene fusion as a determinant of morphology and prognosis in synovial sarcoma. *N. Engl. J. Med.* 338: 153-160.
- Nilsson, G., et al. 1999. The SYT-SSX1 variant of synovial sarcoma is associated with a high rate of tumor cell proliferation and poor clinical outcome. *Cancer Res.* 59: 3180-3184.

CHROMOSOMAL LOCATION

Genetic locus: SS18 (human) mapping to 18q11.2, SS18L1 (human) mapping to 20q13.33; Ss18 (mouse) mapping to 18 A1, Ss18I1 (mouse) mapping to 2 H4.

SOURCE

SYT (E-5) is a mouse monoclonal antibody raised against amino acids 1-80 mapping at the N-terminus of SYT of human origin.

STORAGE

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

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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374299 X, 200 µg/0.1 ml.

APPLICATIONS

SYT (E-5) is recommended for detection of SYT and CREST 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).

SYT (E-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

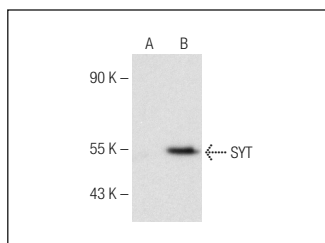
Molecular Weight of SYT: 54 kDa.

Positive Controls: SYT (h): 293T Lysate: sc-178011, IMR-32 cell lysate: sc-2409 or HeLa nuclear extract: sc-2120.

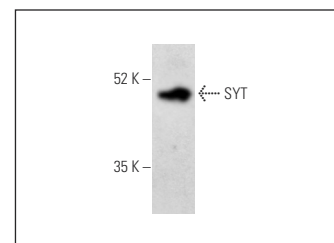
RECOMMENDED SUPPORT REAGENTS

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 (E-5): sc-374299. Western blot analysis of SYT expression in non-transfected: sc-117752 (A) and human SYT transfected: sc-178011 (B) 293T whole cell lysates.



SYT (E-5): sc-374299. Western blot analysis of SYT expression in IMR-32 whole cell lysate.

SELECT PRODUCT CITATIONS

- Yu, Y., et al. 2020. Overexpression of long noncoding RNA CUDR promotes hepatic differentiation of human umbilical cord mesenchymal stem cells. *Mol. Med. Rep.* 21: 1051-1058.

RESEARCH USE

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