SANTA CRUZ BIOTECHNOLOGY, INC.

SYT (E-5): sc-374299

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 issue 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

1. 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.
2. 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.
3. 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.
4. 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.
5. Tureci, O., et al. 1998. Expression of SSX genes in human tumors. Int. J. Cancer 77: 19-23.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: SS18 (human) mapping to 18q11.2, SS18L1 (human) mapping to 20q13.33; Ss18 (mouse) mapping to 18 A1, Ss18l1 (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.

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.

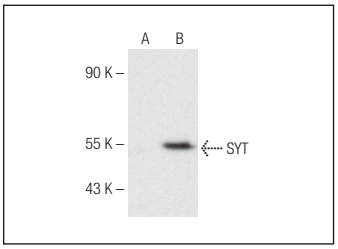
Molecular Weight of SYT: 54 kDa.

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

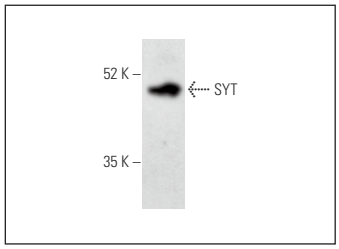
RECOMMENDED SUPPORT REAGENTS

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

1. 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.

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.