SANTA CRUZ BIOTECHNOLOGY, INC.

SYT (N-18): sc-8819

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 mono-phasic. Genetic analysis indicates that biphasic synovial sarcomas contain SYT-SSX1 fusions, whereas SYT-SSX2 fusions are found in mono-phasic 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 Kruppel-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.

CHROMOSOMAL LOCATION

Genetic locus: SS18 (human) mapping to 18q11.2; Ss18 (mouse) mapping to 18 A1.

SOURCE

SYT (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SYT 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8819 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8819 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SYT (N-18) is recommended for detection of SYT 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

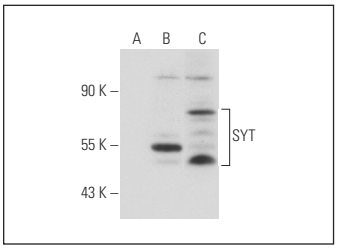
SYT (N-18) is also recommended for detection of SYT in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for SYT siRNA (h): sc-38449, SYT siRNA (m): sc-38450, SYT shRNA Plasmid (h): sc-38449-SH, SYT shRNA Plasmid (m): sc-38450-SH, SYT shRNA (h) Lentiviral Particles: sc-38449-V and SYT shRNA (m) Lentiviral Particles: sc-38450-V.

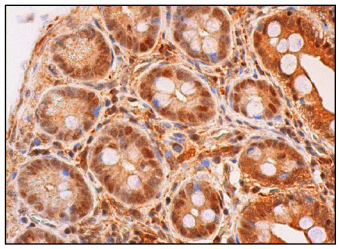
SYT (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: SYT (h): 293T Lysate: sc-178011, IMR-32 cell lysate: sc-2409 or HeLa whole cell lysate: sc-2200.

DATA



SYT (N-18): sc-8819. Western blot analysis of SYT expression in non-transfected 293T: sc-117752 (**A**), human SYT transfected 293T: sc-178011 (**B**) whole cell lysates and HeLa (**C**) nuclear extract.



SYT (N-18): sc-8819. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear and cytoplasmic staining of glandular cells, endothelial cells and Interstitial cells.

SELECT PRODUCT CITATIONS

1. He, R., et al. 2007. Immunostaining for SYT protein discriminates synovial sarcoma from other soft tissue tumors: analysis of 146 cases. Mod. Pathol. 20: 522-528.
2. Trautmann, M., et al. 2013. SS18-SSX fusion protein-induced Wnt/β-catenin signaling is a therapeutic target in synovial sarcoma. Oncogene 33: 5006-5016.

RESEARCH USE

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