

SYT (H-80): sc-28698

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 mono-phasic 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 B1, Ss18l1 (mouse) mapping to 2 H4.

SOURCE

SYT (H-80) is a rabbit polyclonal 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 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-28698 X, 200 µg/0.1 ml.

APPLICATIONS

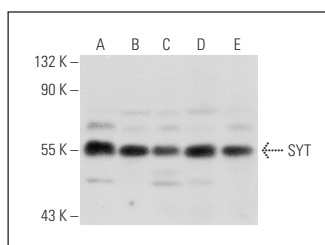
SYT (H-80) is recommended for detection of SYT and SYT homolog-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SYT (H-80) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

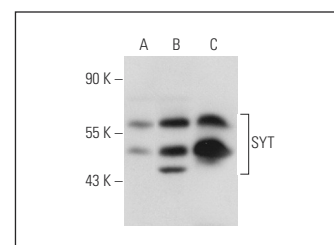
Molecular Weight of SYT: 54 kDa.

Positive Controls: SYT (h): 293T Lysate: sc-178011, A-431 whole cell lysate: sc-2201 or HeLa nuclear extract: sc-2120.

DATA



SYT (H-80): sc-28698. Western blot analysis of SYT expression in A-431 (A), Hep G2 (B), COLO 205 (C), NIH/3T3 (D) and A549 (E) whole cell lysates.



SYT (H-80): sc-28698. 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.

SELECT PRODUCT CITATIONS

- Stahl, B.T., et al. 2013. Kinetic analysis of npBAF to nBAF switching reveals exchange of SS18 with CREST and integration with neural developmental pathways. *J. Neurosci.* 33: 10348-10361.
- Dykhuisen, E.C., et al. 2013. BAF complexes facilitate decatenation of DNA by topoisomerase II α . *Nature* 497: 624-627.

RESEARCH USE

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



Try **SYT (D-3): sc-390615** or **SYT (C-3): sc-390266**, our highly recommended monoclonal alternatives to SYT (H-80).