

SSAT2 (C-14): sc-165591

BACKGROUND

SSAT2 (spermidine/spermine N1-acetyltransferase family member 2), also known as diamine acetyltransferase 2, polyamine N-acetyltransferase 2 or thialysine N-ε-acetyltransferase, is a 170 amino acid protein that exists as a homodimer and belongs to the acetyltransferase family. Localizing to cytoplasm, SSAT2 is found in bone, cervix, ovary and pineal gland. SSAT2, which shares 46% amino acid identity to SSAT1, is expressed in many of the same tissues as SSAT1, however SSAT1 is more widely expressed. SSAT2 contains one N-acetyltransferase domain and functions as an enzyme, catalyzing the acetylation of polyamines, and may also act as a transcriptional co-activator. SSAT2 promotes ubiquitination of HIF-1α by stabilizing the interaction of Elongin C and VHL. The gene encoding SSAT 2 maps to human chromosome 17p13.1.

REFERENCES

- Levillain, O., et al. 2003. Influence of testosterone on regulation of ODC, antizyme, and N1-SSAT gene expression in mouse kidney. *Am. J. Physiol. Renal Physiol.* 285: F498-F506.
- Chen, Y., et al. 2003. Genomic identification and biochemical characterization of a second spermidine/spermine N1-acetyltransferase. *Biochem. J.* 373: 661-667.
- Coleman, C.S., et al. 2004. Spermidine/spermine-N1-acetyltransferase-2 (SSAT2) acetylates thialysine and is not involved in polyamine metabolism. *Biochem. J.* 384: 139-148.
- Hector, S., et al. 2004. Polyamine catabolism in platinum drug action: Interactions between oxaliplatin and the polyamine analogue N1,N11-diethylnorspermine at the level of spermidine/spermine N1-acetyltransferase. *Mol. Cancer Ther.* 3: 813-822.
- Vogel, N.L., et al. 2006. Spermidine/Spermine N1-Acetyltransferase 2 (SSAT2) functions as a coactivator for NFκB and cooperates with CBP and P/CAF to enhance NFκB-dependent transcription. *Biochim. Biophys. Acta* 1759: 470-477.
- Baek, J.H., et al. 2007. Spermidine/spermine-N1-acetyltransferase 2 is an essential component of the ubiquitin ligase complex that regulates hypoxia-inducible factor 1α. *J. Biol. Chem.* 282: 23572-23580.
- Baek, J.H., et al. 2007. Spermidine/spermine N(1)-acetyltransferase-1 binds to hypoxia-inducible factor-1α (HIF-1α) and RACK1 and promotes ubiquitination and degradation of HIF-1α. *J. Biol. Chem.* 282: 33358-33366.
- Kim, Y.H., et al. 2010. Antitumor agent PX-12 inhibits HIF-1α protein levels through an Nrf2/PMF-1-mediated increase in spermidine/spermine acetyltransferase. *Cancer Chemother. Pharmacol.* 68: 405-413.
- Lee, S.B., et al. 2010. Suppression of exogenous gene expression by spermidine/spermine N1-acetyltransferase 1 (SSAT1) cotransfection. *J. Biol. Chem.* 285: 15548-15556.

CHROMOSOMAL LOCATION

Genetic locus: SAT2 (human) mapping to 17p13.1; Sat2 (mouse) mapping to 11 B3.

SOURCE

SSAT2 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SSAT2 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.

Blocking peptide available for competition studies, sc-165591 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SSAT2 (C-14) is recommended for detection of SSAT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with SSAT.

SSAT2 (C-14) is also recommended for detection of SSAT2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SSAT2 siRNA (h): sc-93747, SSAT2 siRNA (m): sc-153835, SSAT2 shRNA Plasmid (h): sc-93747-SH, SSAT2 shRNA Plasmid (m): sc-153835-SH, SSAT2 shRNA (h) Lentiviral Particles: sc-93747-V and SSAT2 shRNA (m) Lentiviral Particles: sc-153835-V.

Molecular Weight of SSAT2: 20 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.