

# AdSS1 (h): 293T Lysate: sc-116225

## BACKGROUND

Adenylosuccinate synthetase isozyme 1 (AdSS1), also known as IMP-aspartate ligase 1, is a cytoplasmic homodimer belonging to the adenylosuccinate synthetase family. The gene coding for the protein maps against chromosome 14q32.33. AdSS1 catalyses the committer step in the biosynthesis of AMP. It is a target for antibiotics, herbicides and antitumor drugs due to its importance in purine biosynthesis. AdSS1 is upregulated during muscle development and is highly expressed in muscle tissues such as skeletal muscle, tongue, heart and esophagus.

## REFERENCES

1. Guicherit, O.M., et al. 1994. Amplification of an adenylosuccinate synthetase gene in alanosine-resistant murine T-lymphoma cells. Molecular cloning of a cDNA encoding the "non-muscle" isozyme. *J. Biol. Chem.* 269: 4488-4496.
2. Lewis, A.L., et al. 1996. Structure and expression of the murine muscle adenylosuccinate synthetase gene. *J. Biol. Chem.* 271: 22647-22656.
3. Wang, W., et al. 1997. Relationship of conserved residues in the IMP binding site to substrate recognition and catalysis in *Escherichia coli* adenylosuccinate synthetase. *J. Biol. Chem.* 272: 16911-16916.
4. Lewis, A.L., et al. 1999. Combinatorial interactions regulate cardiac expression of the murine adenylosuccinate synthetase 1 gene. *J. Biol. Chem.* 274: 14188-14197.
5. Xia, Y., et al. 2000. Electrical stimulation of neonatal cardiac myocytes activates the NFAT3 and GATA4 pathways and up-regulates the adenylosuccinate synthetase 1 gene. *J. Biol. Chem.* 275: 1855-1863.
6. Wen, H.Y., et al. 2002. The adenylosuccinate synthetase-1 gene is activated in the hypertrophied heart. *J. Cell. Mol. Med.* 6: 235-243.
7. Iancu, C.V., et al. 2002. IMP, GTP, and 6-phosphoryl-IMP complexes of recombinant mouse muscle adenylosuccinate synthetase. *J. Biol. Chem.* 277: 26779-26787.

## CHROMOSOMAL LOCATION

Genetic locus: ADSSL1 (human) mapping to 14q32.33.

## PRODUCT

AdSS1 (h): 293T Lysate represents a lysate of human AdSS1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

AdSS1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive AdSS1 antibodies. Recommended use: 10-20 µl per lane.

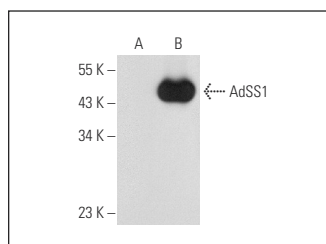
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

AdSS1 (G-9): sc-166401 is recommended as a positive control antibody for Western Blot analysis of enhanced human AdSS1 expression in AdSS1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

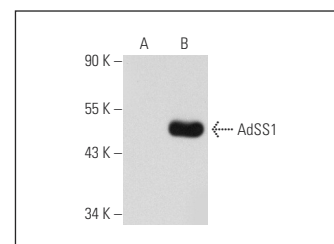
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



AdSS1 (G-9): sc-166401. Western blot analysis of AdSS1 expression in non-transfected: sc-117752 (A) and human AdSS1 transfected: sc-116225 (B) 293T whole cell lysates.



AdSS1 (H-2): sc-166470. Western blot analysis of AdSS1 expression in non-transfected: sc-117752 (A) and human AdSS1 transfected: sc-116225 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.