

# AdSS2 (K-12): sc-33328

## BACKGROUND

Cellular signal transduction pathways are initiated by the binding of external signals, such as steroids, charged-small molecules or proteins, to their respective receptors. These signaling pathways are important in eliciting a cellular response to external stimuli. Proteins involved in signaling pathways may have several different regulatory and/or enzymatic functions, including recruitment, activation, phosphorylation, maintenance and transport. Mutations in these pathways may be implicated in a variety of diseases, suggesting that these intermediary proteins may be potential therapeutic targets. Adenylosuccinate synthetase 2 (AdSS2 or AMPase 2) is important in the AMP biosynthesis pathway (purine nucleotide biosynthesis). It is a cytoplasmic protein that belongs to the adenylosuccinate synthetase family of proteins. AdSS2 can form homodimers.

## REFERENCES

- Powell, S.M., et al. 1992. Cloning and characterization of the cDNA encoding human adenylosuccinate synthetase. *FEBS Lett.* 303: 4-10.
- 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.
- Iancu, C.V., et al. 2002. Feedback inhibition and product complexes of recombinant mouse muscle adenylosuccinate synthetase. *J. Biol. Chem.* 277: 40536-40543.
- Wen, H.Y., et al. 2002. The adenylosuccinate synthetase 1 gene is activated in the hypertrophied heart. *J. Cell. Mol. Med.* 6: 235-243.
- Mahnke, D.K., et al. 2005. Calcium activates erythrocyte AMP deaminase [isoform E (AMPD3)] through a protein-protein interaction between calmodulin and the N-terminal domain of the AMPD3 polypeptide. *Biochemistry* 44: 5551-5559.

## CHROMOSOMAL LOCATION

Genetic locus: ADSS (human) mapping to 1q44; Adss (mouse) mapping to 1 H4.

## SOURCE

AdSS2 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AdSS2 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-33328 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

AdSS2 (K-12) is recommended for detection of AdSS2 of human and, to a lesser extent, mouse and rat 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).

AdSS2 (K-12) is also recommended for detection of AdSS2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for AdSS2 siRNA (h): sc-44960, AdSS2 siRNA (m): sc-44961, AdSS2 shRNA Plasmid (h): sc-44960-SH, AdSS2 shRNA Plasmid (m): sc-44961-SH, AdSS2 shRNA (h) Lentiviral Particles: sc-44960-V and AdSS2 shRNA (m) Lentiviral Particles: sc-44961-V.

Molecular Weight of AdSS2: 91 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.

## 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) or our catalog for detailed protocols and support products.