SANTA CRUZ BIOTECHNOLOGY, INC.

ARS2 (H-300): sc-135083

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARS2 (arsenate (or arsenite-) resistance protein 2), also known as ASR2, is an 876 amino acid protein that belongs to the ARS2 family. Expressed ubiquitously in mammals and localized to the nucleus, ARS2 is evolutionarily conserved (at least 98% sequence identity among mammals) and appears to be essential for early mammalian development with a likely role in vital cellular processes. Mouse embryos lacking ARS2 exhibit excessive apoptosis and die around the time of implantation. In humans, ARS2 is known to interact with RNPS1, a protein involved in the activation of pre-mRNA splicing. In addition, the gene encoding ARS2 is located on chromosome 7 within the region that is commonly deleted in myeloid leukemia. This suggests a possible role of ARS2 in the development of myeloid leukemia. Due to alternative splicing events, ARS2 exists in four isoforms, namely isoform A, isoform B, isoform 3 and isoform 4.

REFERENCES

1. Rossman, T.G. and Wang, Z. 1999. Expression cloning for arsenite-resistance resulted in isolation of tumor-suppressor fau cDNA: possible involvement of the ubiquitin system in arsenic carcinogenesis. Carcinogenesis 20: 311-316.
2. Rossman, T.G., Visalli, M.A. and Komissarova, E.V. 2003. Fau and its ubiquitin-like domain (FUBI) transforms human osteogenic sarcoma (HOS) cells to anchorage-independence. Oncogene 22: 1817-1821.
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4. Ordóñez, E., Letek, M., Valbuena, N., Gil, J.A. and Mateos, L.M. 2005. Analysis of genes involved in arsenic resistance in *Corynebacterium glutamicum* ATCC 13032. Appl. Environ. Microbiol. 71: 6206-6215.
5. Bennetts, J.S., Fowles, L.F., Berkman, J.L., van Bueren, K.L., Richman, J.M., Simpson, F. and Wicking, C. 2006. Evolutionary conservation and murine embryonic expression of the gene encoding the SERTA domain-containing protein CDCA4 (HEPP). Gene 374: 153-165.
6. Mateos, L.M., Ordóñez, E., Letek, M. and Gil, J.A. 2006. *Corynebacterium glutamicum* as a model bacterium for the bioremediation of arsenic. Int. Microbiol. 9: 207-215.

CHROMOSOMAL LOCATION

Genetic locus: SRRT (human) mapping to 7q22.1; Srrt (mouse) mapping to 5 G2.

SOURCE

ARS2 (H-300) is a rabbit polyclonal antibody raised against amino acids 577-876 mapping at the C-terminus of ARS2 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.

APPLICATIONS

ARS2 (H-300) is recommended for detection of ARS2 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).

ARS2 (H-300) is also recommended for detection of ARS2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ARS2 siRNA (h): sc-89387, ARS2 siRNA (m): sc-141277, ARS2 shRNA Plasmid (h): sc-89387-SH, ARS2 shRNA Plasmid (m): sc-141277-SH, ARS2 shRNA (h) Lentiviral Particles: sc-89387-V and ARS2 shRNA (m) Lentiviral Particles: sc-141277-V.

Molecular Weight (predicted) of ARS2: 100 kDa.

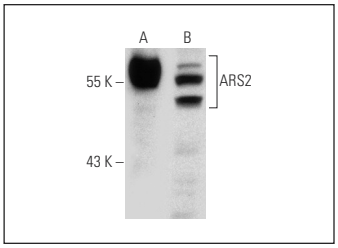
Molecular Weight (observed) of ARS2: 131 kDa.

Positive Controls: mouse lymph node extract: sc-364243, T24 cell lysate: sc-2292 or Jurkat whole cell lysate: sc-2204.

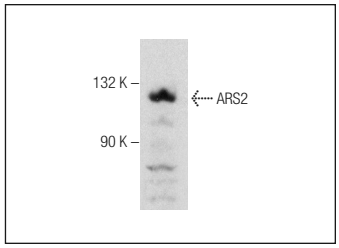
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ARS2 (H-300): sc-135083. Western blot analysis of ARS2 expression in mouse lymph node tissue extract (**A**) and T24 whole cell lysate (**B**).



ARS2 (H-300): sc-135083. Western blot analysis of ARS2 expression in Jurkat whole cell lysate.

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.