

ARSA (H-7): sc-390568

BACKGROUND

ARSA is the human homolog of the bacterial ARSA, a member of the ATPase superfamily. ARSA and *arsB* have been postulated to form a membrane complex that functions as an anion-translocating ATPase with ARSA, thereby providing the catalytic energy transducing component of the pump. ARSA hydrolyses ATP in the presence of its anionic substrate antimonite, and produces resistance to both arsenite and antimonite. The active form of ARSA is a homodimer with four nucleotide binding sites, two from each monomer.

REFERENCES

- Rosen, B.P. 1990. The plasmid-encoded arsenical resistance pump: an anion-translocating ATPase. *Res. Microbiol.* 141: 336-341.
- Rosen, B.P., et al. 1990. Molecular analysis of an ATP-dependent anion pump. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 326: 455-463.
- Tisa, L.S., et al. 1990. Molecular characterization of an anion pump. The *ArsB* protein is the membrane anchor for the ARSA protein. *J. Biol. Chem.* 265: 190-194.
- Li, J., et al. 1996. Interaction of ATP binding sites in the ARSA ATPase, the catalytic subunit of the *Ars* pump. *J. Biol. Chem.* 271: 25247-25252.
- Rosen, B.P., et al. 1999. Mechanism of the ARSA ATPase. *Biochim. Biophys. Acta* 1461: 207-215.
- Walmsley, A.R., et al. 1999. The ATPase mechanism of ARSA, the catalytic subunit of the arsenite pump. *J. Biol. Chem.* 274: 16153-16161.
- Walmsley, A.R., et al. 2001. Antimonite regulation of the ATPase activity of ARSA, the catalytic subunit of the arsenical pump. *Biochem. J.* 360: 589-597.

CHROMOSOMAL LOCATION

Genetic locus: ASNA1 (human) mapping to 19p13.2; *Asna1* (mouse) mapping to 8 C3.

SOURCE

ARSA (H-7) is a mouse monoclonal antibody raised against amino acids 1-161 mapping at the N-terminus of arsenical pump-driving ATPase of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARSA (H-7) is available conjugated to agarose (sc-390568 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390568 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390568 PE), fluorescein (sc-390568 FITC), Alexa Fluor[®] 488 (sc-390568 AF488), Alexa Fluor[®] 546 (sc-390568 AF546), Alexa Fluor[®] 594 (sc-390568 AF594) or Alexa Fluor[®] 647 (sc-390568 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390568 AF680) or Alexa Fluor[®] 790 (sc-390568 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

ARSA (H-7) is recommended for detection of ARSA of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

ARSA (H-7) is also recommended for detection of ARSA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ARSA siRNA (h): sc-105093, ARSA siRNA (m): sc-141278, ARSA shRNA Plasmid (h): sc-105093-SH, ARSA shRNA Plasmid (m): sc-141278-SH, ARSA shRNA (h) Lentiviral Particles: sc-105093-V and ARSA shRNA (m) Lentiviral Particles: sc-141278-V.

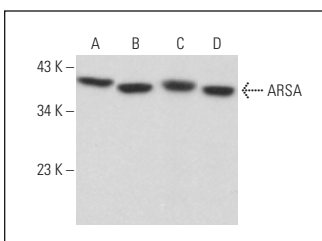
Molecular Weight of ARSA: 39 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or mouse cerebellum extract: sc-2403.

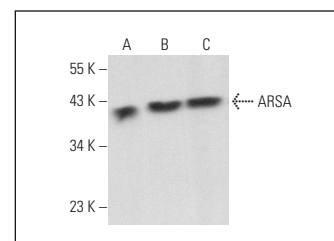
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



ARSA (H-7): sc-390568. Western blot analysis of ARSA expression in HeLa (A) and HEK293 (B) whole cell lysates and human cerebellum (C) and mouse cerebellum (D) tissue extracts.



ARSA (H-7): sc-390568. Western blot analysis of ARSA expression in Hep G2 (A), C2C12 (B) and A-10 (C) whole cell lysates.

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.