

SART-1 (F-4): sc-376288

BACKGROUND

SART-1 (squamous cell carcinoma antigen recognized by T cells), also known as Ara1, HOMS1 or Snu66, is a ubiquitously expressed protein that is involved in mRNA splicing and cell proliferation. The gene encoding SART-1 is post-transcriptionally modified to produce two proteins: SART-1(800), which is the native transcript and is localized to the nucleus of proliferating cells, and SART-1(259), which is expressed in the cytosol of epithelial cancers. While both proteins are involved in regulating cell proliferation, SART-1(259) is also an essential component in the spliceosome C assembly pathway playing a role in pre-mRNA splicing. SART-1(259) possesses a tumor-rejection antigen that can induce restricted cytotoxic T lymphocytes in cancer patients, suggesting a possible role in immunotherapy. Additionally, the polymorphic variation within the SART-1 gene may be a cause of atopy, an allergic hypersensitivity characterized by eczema, asthma and allergic conjunctivitis.

REFERENCES

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2. Kawamoto, M., et al. 1999. Expression of the SART-1 tumor rejection antigen in breast cancer. *Int. J. Cancer* 80: 64-67.
3. Bolland, D.J., et al. 2001. Intron loss in the SART1 genes of *Fugu rubripes* and *Tetraodon nigroviridis*. *Gene* 271: 43-49.
4. Wheatley, A.P., et al. 2002. Identification of the autoantigen SART-1 as a candidate gene for the development of atopy. *Hum. Mol. Genet.* 11: 2143-2146.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605941. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Yoshida, S., et al. 2004. Generation of a human leukocyte antigen-A24-restricted antitumor cell with the use of SART-1 peptide and dendritic cells in patients with malignant brain tumors. *J. Lab. Clin. Med.* 144: 201-207.
7. Hosokawa, M., et al. 2005. Cell cycle arrest and apoptosis induced by SART-1 gene transduction. *Anticancer Res.* 25: 1983-1990.
8. Matsumoto, T., et al. 2006. Essential domains for ribonucleoprotein complex formation required for retrotransposition of telomere-specific non-long terminal repeat retrotransposon SART1. *Mol. Cell. Biol.* 26: 5168-5179.

CHROMOSOMAL LOCATION

Genetic locus: SART1 (human) mapping to 11q13.1; Sart1 (mouse) mapping to 19 A.

SOURCE

SART-1 (F-4) is a mouse monoclonal antibody raised against amino acids 107-406 mapping near the N-terminus of SART-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SART-1 (F-4) is recommended for detection of SART-1 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).

Suitable for use as control antibody for SART-1 siRNA (h): sc-62978, SART-1 siRNA (m): sc-62979, SART-1 shRNA Plasmid (h): sc-62978-SH, SART-1 shRNA Plasmid (m): sc-62979-SH, SART-1 shRNA (h) Lentiviral Particles: sc-62978-V and SART-1 shRNA (m) Lentiviral Particles: sc-62979-V.

Molecular Weight (predicted) of SART-1: 90 kDa.

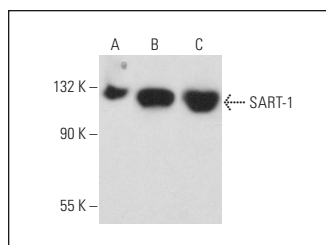
Molecular Weight (observed) of SART-1: 117-132 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Raji whole cell lysate: sc-364236 or MOLT-4 cell lysate: sc-2233.

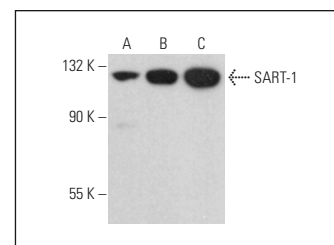
RECOMMENDED SUPPORT REAGENTS

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



SART-1 (F-4): sc-376288. Western blot analysis of SART-1 expression in Jurkat nuclear extract (A) and Raji (B) and MOLT-4 (C) whole cell lysates.



SART-1 (F-4): sc-376288. Western blot analysis of SART-1 expression in Jurkat (A), HeLa (B) and Raji (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.

PROTOCOLS

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