

SART-1 (A-5): sc-376460

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.

CHROMOSOMAL LOCATION

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

SOURCE

SART-1 (A-5) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SART-1 (A-5) is available conjugated to agarose (sc-376460 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376460 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376460 PE), fluorescein (sc-376460 FITC), Alexa Fluor® 488 (sc-376460 AF488), Alexa Fluor® 546 (sc-376460 AF546), Alexa Fluor® 594 (sc-376460 AF594) or Alexa Fluor® 647 (sc-376460 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376460 AF680) or Alexa Fluor® 790 (sc-376460 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SART-1 (A-5) 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), immunohistochemistry (including paraffin-embedded sections) (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.

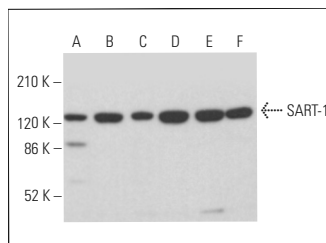
Molecular Weight (observed) of SART-1: 117-132 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

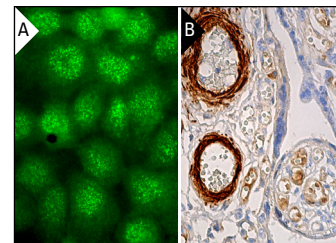
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SART-1 (A-5): sc-376460. Western blot analysis of SART-1 expression in SUP-T1 (A), HeLa (B), 3T3-L1 (C), NCI-H460 (D), WEHI-231 (E) and RAW 264.7 (F) whole cell lysates.



SART-1 (A-5): sc-376460. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of endothelial cells and vascular smooth muscle cells (B).

SELECT PRODUCT CITATIONS

1. Sundaramoorthy, S., et al. 2014. Functional genomics identifies a requirement of pre-mRNA splicing factors for sister chromatid cohesion. *EMBO J.* 33: 2623-2642.

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.

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