

# SART-1 (C-20): sc-55981

## 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. 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.
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7. 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.
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## CHROMOSOMAL LOCATION

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

## SOURCE

SART-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SART-1 of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## 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-55981 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-55981 X, 200 µg/0.1 ml.

## APPLICATIONS

SART-1 (C-20) is recommended for detection of SART-1 of mouse, rat and human 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).

SART-1 (C-20) is also recommended for detection of SART-1 in additional species, including canine, bovine and porcine.

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.

SART-1 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

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

Positive Controls: Jurkat nuclear extract: sc-2132.

## 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.