

SCAI (N-18): sc-244080

BACKGROUND

SCAI (suppressor of cancer cell invasion) is a 606 amino acid single-pass membrane protein that belongs to the SCAI family. SCAI forms a nuclear ternary complex with MRTF-A and SRF. Localizing to nucleus and cytoplasm, the SCAI protein interacts with Dia 1. The SCAI protein is also a tumor suppressor that functions to suppress MRTF-A-induced SRF transcriptional activity. SCAI not only inhibits MRTF-A but can also regulate the activities of other MRTFs such as myocardin, or the oncogenic OTT-MAL fusion protein. It has been suggested that MKL1-SRF signaling can upregulate beta1-integrin expression, thus promoting tumor cell invasiveness, whereas SCAI significantly antagonizes this process. SCAI may function in the Rho A-Dia 1 signal transduction pathway and regulate cell migration through transcriptional regulation of Integrin β 1. SCAI, a binding partner and inhibitor of MKL1 that is downregulated in various tumors has been identified. Existing as two alternatively spliced isoforms, the SCAI gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *A. thaliana*, and maps to human chromosome 9q33.3.

REFERENCES

1. Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
2. Brandt, D.T., et al. 2009. Regulation of myocardin-related transcriptional coactivators through cofactor interactions in differentiation and cancer. *Cell Cycle* 8: 2523-2527.
3. Brandt, D.T., et al. 2009. SCAI acts as a suppressor of cancer cell invasion through the transcriptional control of β 1-integrin. *Nat. Cell Biol.* 11: 557-568.

CHROMOSOMAL LOCATION

Genetic locus: SCAI (human) mapping to 9q33.3; Scai (mouse) mapping to 2 B.

SOURCE

SCAI (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SCAI of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-244080 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

SCAI (N-18) is recommended for detection of SCAI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

SCAI (N-18) is also recommended for detection of SCAI in additional species, including canine and bovine.

Suitable for use as control antibody for SCAI siRNA (h): sc-92937, SCAI siRNA (m): sc-141949, SCAI shRNA Plasmid (h): sc-92937-SH, SCAI shRNA Plasmid (m): sc-141949-SH, SCAI shRNA (h) Lentiviral Particles: sc-92937-V and SCAI shRNA (m) Lentiviral Particles: sc-141949-V.

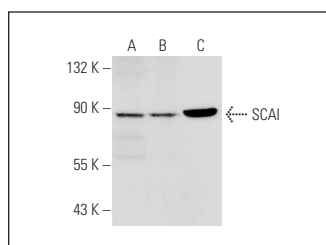
Molecular Weight of SCAI isoforms 1/2: 70/73 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, Jurkat whole cell lysate: sc-2204 or mouse thymus extract: sc-2406.

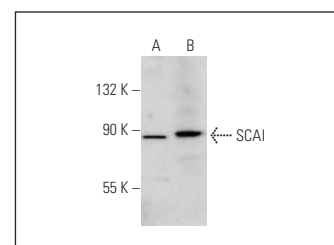
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SCAI (N-18): sc-244080. Western blot analysis of SCAI expression in Jurkat (A), K-562 (B) and HCT-116 (C) whole cell lysates.



SCAI (N-18): sc-244080. Western blot analysis of SCAI expression in HEK293 whole cell lysate (A) and mouse thymus tissue extract (B).

RESEARCH USE

For research use only, not for use in diagnostic procedures.