

SA-1 (S-16): sc-54466

BACKGROUND

The cohesion complex is a multi-protein structure that is required for cohesion of sister chromatids after DNA replication and may be involved in mitotic spindle pole assembly. The complex is composed of a heterodimer between SMC1 and SMC3, two proteins that are linked at their heads by Rad21, and an additional protein called SA-1 (stromal antigen 1). SA-1, also known as STAG1, is a 1,258 amino acid component of the cohesion complex that interacts directly with Rad21. Localized to the nucleus, SA-1 associates with chromatin and, upon phosphorylation by Plk, dissociates from chromatin to allow proper chromosome separation during anaphase. SA-1, the human homolog of yeast Scc3p, is expressed in thymus, bone marrow and spleen and is 99% similar to its mouse counterpart.

REFERENCES

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2. Sumara, I., Vorlaufer, E., Geffers, C., Peters, B.H. and Peters, J.M. 2000. Characterization of vertebrate cohesin complexes and their regulation in prophase. *J. Cell Biol.* 151: 749-762.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 604358. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Anazawa, Y., Arakawa, H., Nakagawa, H. and Nakamura, Y. 2004. Identification of STAG1 as a key mediator of a p53-dependent apoptotic pathway. *Oncogene* 23: 7621-7627.
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CHROMOSOMAL LOCATION

Genetic locus: STAG1 (human) mapping to 3q22.3; Stag1 (mouse) mapping to 9 E4.

SOURCE

SA-1 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SA-1 of human origin.

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-54466 P, (100 µg 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.

APPLICATIONS

SA-1 (S-16) is recommended for detection of cohesin subunit SA-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).

SA-1 (S-16) is also recommended for detection of cohesin subunit SA-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SA-1 siRNA (h): sc-62968, SA-1 siRNA (m): sc-62969, SA-1 shRNA Plasmid (h): sc-62968-SH, SA-1 shRNA Plasmid (m): sc-62969-SH, SA-1 shRNA (h) Lentiviral Particles: sc-62968-V and SA-1 shRNA (m) Lentiviral Particles: sc-62969-V.

Molecular Weight of SA-1: 155 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, HEL 92.1.7 cell lysate: sc-2270 or mouse spleen extract: sc-2391.

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 or our catalog for detailed protocols and support products.



Try **SA-1 (A-9): sc-365061** or **SA-1 (F-3): sc-271976**, our highly recommended monoclonal alternatives to SA-1 (S-16).