

# SAGE1 (G-13): sc-169244

## BACKGROUND

Cancer/testis (CT) antigens are protein antigens with normal expression restricted to adult testicular germ cells, and yet are aberrantly activated and expressed in a proportion of various types of human cancer. More than 100 CT antigen genes have been reported, with approximately 30 being members of multigene families on the X chromosome, so-called CT-X genes. Most CT-X genes are expressed at the spermatogonia stage of spermatogenesis, and their functions are mostly unknown. SAGE1 (sarcoma antigen 1) is a 904 amino acid protein that contains 15 repeated motifs of 47 amino acids. SAGE1 is expressed mainly in bladder, lung, head and neck carcinomas, but not expressed in normal tissues except for testis. The SAGE1 gene maps to human chromosome Xq26.3, near the MAGEA genes.

## REFERENCES

1. Martelange, V., et al. 2000. Identification on a human sarcoma of two new genes with tumor-specific expression. *Cancer Res.* 60: 3848-3855.
2. Miyahara, Y., et al. 2005. Determination of cellularly processed HLA-A2402-restricted novel CTL epitopes derived from two cancer germ line genes, MAGE-A4 and SAGE. *Clin. Cancer Res.* 11: 5581-5589.
3. Ross, M.T., et al. 2005. The DNA sequence of the human X chromosome. *Nature* 434: 325-337.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 300359. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Caballero, O.L., et al. 2009. Cancer/testis (CT) antigens: potential targets for immunotherapy. *Cancer Sci.* 100: 2014-2021.
6. Chen, W., et al. 2010. Alternative lengthening of telomeres in hTERT-inhibited laryngeal cancer cells. *Cancer Sci.* 101: 1769-1776.

## CHROMOSOMAL LOCATION

Genetic locus: SAGE1 (human) mapping to Xq26.3.

## SOURCE

SAGE1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAGE1 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-169244 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

SAGE1 (G-13) is recommended for detection of SAGE1 of 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).

Suitable for use as control antibody for SAGE1 siRNA (h): sc-91094, SAGE1 shRNA Plasmid (h): sc-91094-SH and SAGE1 shRNA (h) Lentiviral Particles: sc-91094-V.

Molecular Weight of SAGE1: 99 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

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