SANTA CRUZ BIOTECHNOLOGY, INC.

SCCA1/2 (C-18): sc-21891

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Metastasis of a primary tumor to a distant site is determined through signaling cascades that break down interactions between the cell and extracellular matrix proteins. Among the proteins mediating metastasis are serine proteases, such as neutrophil elastase. In 1985, Dr. Jim Travis and Dr. R.W. Carrell designated an emerging family of serine protease inhibitors as the serpin family, which share homology in both primary amino acid sequence and tertiary structure. Serpins contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. Serine proteases bind to this substrate mimic in a 1:1 stoichiometric fashion and become catalytically inactive. Aberrant expression of serpin family members can contribute to a number of conditions, including emphysema (alpha-1 antitrypsin deficiency), fatal bleeding (elastase to thrombin specificity) and thrombosis (antithrombin deficiency), and are indicators of cancer stage phenotypes (circulating levels of squamous cell carcinoma antigen, known as SCCA1, increase in advancing stages of some cervical, lung, esophageal, and head and neck cancers). Human chromosome position 18q21.3 contains a cluster of serpins, including a tandem duplication of the SCCA gene, plasminogen activator inhibitor type 2, and maspin. SCCA is transcribed by two nearly identical genes (SCCA1 and SCCA2), and is mainly produced as SCCA1. The human SCCA1 gene encodes a 390 amino acid protein that was originally isolated from a metastatic cervical squamous cell carcinoma.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. Johns Hopkins University, Baltimore, MD. MIM Number: 600518: 08/11/1999. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Hefler, L., et al. 1999. Serum concentrations of squamous cell carcinoma antigen in patients with vulvar intraepithelial neoplasia and vulvar cancer. Int. J. Cancer 84: 299-303.
3. Kishimoto, H., et al. 2000. Isolation and characterisation of adenoid squamous carcinoma cells highly producing SCC antigen and CEA from carcinoma of the maxillary sinus. Oral Oncol. 36: 70-75.
4. Micke, O., et al. 2000. The impact of squamous cell carcinoma (SCC) antigen in the follow-up after radiotherapy in patients with cervical cancer. Anticancer Res. 20: 5113-5115.
5. Yasumatsu, R., et al. 2001. SCCA1 expression in T-lymphocytes peripheral to cancer cells is associated with the elevation of serum SCC antigen in squamous cell carcinoma of the tongue. Cancer Letts. 167: 205-213.

SOURCE

SCCA1/2 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SCCA1 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-21891 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SCCA1/2 (C-18) is recommended for detection of SCCA1/2 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).

Molecular Weight of SCCA1: 45 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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.

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 or our catalog for detailed protocols and support products.