

# SCCA1/2 (FL-390): sc-25741

## 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 18q21.33 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.

## CHROMOSOMAL LOCATION

Genetic locus: SERPINB4 (human) mapping to 18q21.33.

## SOURCE

SCCA1/2 (FL-390) is a rabbit polyclonal antibody raised against amino acids 1-390 representing full length SCCA2 of human origin.

## PRODUCT

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

## RESEARCH USE

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

## APPLICATIONS

SCCA1/2 (FL-390) is recommended for detection of SCCA1 and SCCA2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for SCCA1/2 siRNA (h): sc-44087, SCCA1/2 shRNA Plasmid (h): sc-44087-SH and SCCA1/2 shRNA (h) Lentiviral Particles: sc-44087-V.

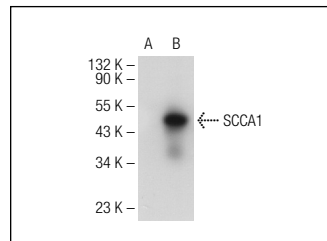
Molecular Weight of SCCA1/2: 45 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SCCA1 (h3): 293T Lysate: sc-158948 or SCC-4 whole cell lysate: sc-364363.

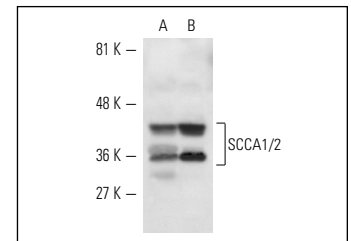
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SCCA1/2 (FL-390): sc-25741. Western blot analysis of SCCA1 expression in non-transfected: sc-117752 (A) and human SCCA1 transfected: sc-158948 (B) 293T whole cell lysates.



SCCA1/2 (FL-390): sc-25741. Western blot analysis of SCCA1/2 expression in SCC-4 (A) and A-431 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Ozu, C., et al. 2009. Establishment and characterization of a new squamous cell carcinoma cell line, TMUU-08, derived from human bladder cancer. *Hum. Cell* 22: 25-29.
- Ullman, E., et al. 2011. Squamous cell carcinoma antigen 1 promotes caspase-8-mediated apoptosis in response to endoplasmic reticulum stress while inhibiting necrosis induced by lysosomal injury. *Mol. Cell. Biol.* 31: 2902-2919.
- Catanzaro, J.M., et al. 2011. Elevated expression of squamous cell carcinoma antigen (SCCA) is associated with human breast carcinoma. *PLoS ONE* 6: e19096.
- Catanzaro, J.M., et al. 2014. Oncogenic Ras induces inflammatory cytokine production by upregulating the squamous cell carcinoma antigens SerpinB3/B4. *Nat. Commun.* 5: 3729.

## STORAGE

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


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Try **SCCA1/2 (B-9): sc-28384**, our highly recommended monoclonal alternative to SCCA1/2 (FL-390). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SCCA1/2 (B-9): sc-28384**.