SANTA CRUZ BIOTECHNOLOGY, INC.

CSS2 (N-13): sc-54665

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The calpain family of proteins are calcium-regulated thiol proteases which have broad endopeptidase activity throughout the body. Calpain small subunit 2, also known as CSS2 or CAPNS2, is a calcium-dependent protease that is expressed ubiquitously in the cytoplasm. Part of a heterodimer composed of a small subunit and a large subunit, CSS2 catalyzes proteolysis of various proteins involved in cytoskeletal remodeling and signal transduction. CSS2 also acts as a chaperone to the larger subunit, mediating its correct folding and conformation. When bound as a heterodimer, CSS2 is thought to keep the catalytic activity of the large subunit dormant. After binding calcium, CSS2 is released from the complex, thereby activating the large subunit and allowing CSS2 to translocate from the cytoplasm to the cell membrane. Defects in the gene encoding CSS2 result in incorrect calpain activity and retarded fetal development, suggesting that CSS2 expression is essential for proper growth.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CAPNS2 (human) mapping to 16q12.2; Capns2 (mouse) mapping to 8 C5.

SOURCE

CSS2 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CSS2 of human origin.

STORAGE

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

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-54665 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CSS2 (N-13) is recommended for detection of CSS2 of mouse 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).

Suitable for use as control antibody for CSS2 siRNA (h): sc-62160, CSS2 siRNA (m): sc-62161, CSS2 shRNA Plasmid (h): sc-62160-SH, CSS2 shRNA Plasmid (m): sc-62161-SH, CSS2 shRNA (h) Lentiviral Particles: sc-62160-V and CSS2 shRNA (m) Lentiviral Particles: sc-62161-V.

Molecular Weight of CSS2: 31 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™ 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.