SANTA CRUZ BIOTECHNOLOGY, INC.

Calpain 13 (A-4): sc-514082

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Calpains are calcium-activated thiol proteases. They are heterodimers with one large subunit and one small subunit. The large subunit varies between family members and can be active without the small subunit. Calpains are involved in intracellular processing of proteins. Calpain 13, also called Sol H, is the most divergent caplain member. It is a homolog of Sol, an optic lobe gene product of Drosophila. Calpain 13 is a member of the non-EF-hand subfamily of calpains. Calpain 13 is composed of four domains and consists of 423 amino acid residues. It has a limited tissue distribution but has been found in human brain, testis and lung.

REFERENCES

1. Dear, T.N., et al. 1999. Diverse mRNA expression patterns of the mouse calpain genes Capn5, Capn6 and Capn11 during development. Mech. Dev. 89: 201-209.
2. Huang, Y., et al. 2001. The calpain family and human disease. Trends Mol. Med. 7: 355-362.
3. Dear, T.N., et al. 2001. Identification and characterization of two novel calpain large subunit genes. Gene 274: 245-252.
4. Suzuki, K., et al. 2004. Structure, activation and biology of calpain. Diabetes 53: S12-S18.
5. Gafni, J., et al. 2004. Inhibition of calpain cleavage of Huntingtin reduces toxicity: accumulation of calpain/caspase fragments in the nucleus. J. Biol. Chem. 279: 20211-20220.
6. Ben-Aharon, I., et al. 2006. Calpain 11 is unique to mouse spermatogenic cells. Mol. Reprod. Dev. 73: 767-773.

CHROMOSOMAL LOCATION

Genetic locus: Capn13 (mouse) mapping to 17 E2.

SOURCE

Calpain 13 (A-4) is a mouse monoclonal antibody raised against amino acids 366-665 mapping at the C-terminus of Calpain 13 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calpain 13 (A-4) is available conjugated to agarose (sc-514082 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514082 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514082 PE), fluorescein (sc-514082 FITC), Alexa Fluor® 488 (sc-514082 AF488), Alexa Fluor® 546 (sc-514082 AF546), Alexa Fluor® 594 (sc-514082 AF594) or Alexa Fluor® 647 (sc-514082 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514082 AF680) or Alexa Fluor® 790 (sc-514082 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Calpain 13 (A-4) is recommended for detection of Calpain 13 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 Calpain 13 siRNA (m): sc-62063, Calpain 13 shRNA Plasmid (m): sc-62063-SH and Calpain 13 shRNA (m) Lentiviral Particles: sc-62063-V.

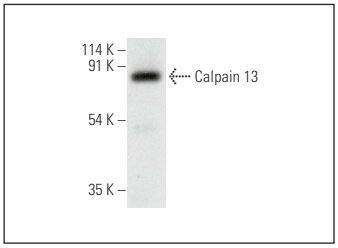
Molecular Weight of Calpain 13: 76 kDa.

Positive Controls: rat spleen extract: sc-2397.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Calpain 13 (A-4): sc-514082. Western blot analysis of Calpain 13 expression in rat spleen tissue extract.

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 for detailed protocols and support products.