



Calpain 13 (H-300): sc-50506

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 calpain member. It is a homolog of Sol, an optic lobe gene product of *Drosophila*. Calpain 13 is a member of the non-EF-hand sub-family of calpains. It is composed of four domains and consists of 423 amino acid residues. Calpain 13 has a limited tissue distribution, but has been found in human brain, testis and lung tissue.

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.
7. Hou, S.T., et al. 2006. Calpain-cleaved collapsin response mediator protein-3 induces neuronal death after glutamate toxicity and cerebral ischemia. *J. Neurosci.* 26: 2241-2249.
8. Saez, M.E., et al. 2006. The therapeutic potential of the calpain family: new aspects. *Drug Discov. Today* 11: 917-923.
9. Medana, I.M., et al. 2007. Cerebral calpain in fatal *falciparum* malaria. *Neuropathol. Appl. Neurobiol.* 33: 179-192.

CHROMOSOMAL LOCATION

Genetic locus: CAPN13 (human) mapping to 2p22-p21; Capn13 (mouse) mapping to 17 E2.

SOURCE

Calpain 13 (H-300) is a rabbit polyclonal antibody raised against amino acids 370-669 mapping at the C-terminus of Calpain 13 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.

RESEARCH USE

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

APPLICATIONS

Calpain 13 (H-300) is recommended for detection of Calpain 13 of human origin by Western Blotting (starting dilution 1:200, 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 (h): sc-62062.

Molecular Weight of Calpain 13: 76 kDa.

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.

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 or our catalog for detailed protocols and support products.