

Calpain 15 (P-15): sc-137361

BACKGROUND

Calpains are calcium-activated thiol proteases involved in intracellular processing of proteins and signal transduction. The classic Calpains are heterodimers with one large subunit, one small subunit and five EF-hand-calcium binding structures. The large subunit varies between family members and can be active without the small subunit. Widely expressed, Calpain 15, which is also known as CAPN15 or SOLH (small optic lobes homolog), is a 1,086 amino acid protein found at highest levels in brain. As a member of the peptidase C2 family, Calpain 15 exists as two alternatively spliced isoforms containing a single calpain catalytic domain and five RanBP2-type zinc fingers. Calpain 15 is encoded by a gene located on human chromosome 16 and is thought to function as an RNA-binding protein and transcription factor and has also been suggested to play a role in protein-to-protein interactions during development of the visual system.

REFERENCES

- Banfi, S., Borsani, G., Rossi, E., Bernard, L., Guffanti, A., Rubboli, F., Marchitello, A., Giglio, S., Coluccia, E., Zollo, M., Zuffardi, O. and Ballabio, A. 1996. Identification and mapping of human cDNAs homologous to *Drosophila* mutant genes through EST database searching. *Nat. Genet.* 13: 167-174.
- Kamei, M., Webb, G.C., Young, I.G. and Campbell, H.D. 1998. SOLH, a human homologue of the *Drosophila melanogaster* small optic lobes gene is a member of the calpain and zinc-finger gene families and maps to human chromosome 16p13.3 near CATM (cataract with microphthalmia). *Genomics* 51: 197-206.
- Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 603267. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Farkas, A., Tompa, P. and Friedrich, P. 2003. Revisiting ubiquity and tissue specificity of human calpains. *Biol. Chem.* 384: 945-949.
- Czogalla, A. and Sikorski, A.F. 2005. Spectrin and calpain: a "target" and a "sniper" in the pathology of neuronal cells. *Cell. Mol. Life Sci.* 62: 1913-1924.

CHROMOSOMAL LOCATION

Genetic locus: SOLH (human) mapping to 16p13.3; Solh (mouse) mapping to 17 A3.3.

SOURCE

Calpain 15 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Calpain 15 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-137361 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calpain 15 (P-15) is recommended for detection of Calpain 15 of human origin and Solh of mouse and rat origin of mouse, rat and 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); non cross-reactive with other Calpain family members.

Calpain 15 (P-15) is also recommended for detection of Calpain 15 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Calpain 15 siRNA (h): sc-92995, Solh siRNA (m): sc-153682, Calpain 15 shRNA Plasmid (h): sc-92995-SH, Solh shRNA Plasmid (m): sc-153682-SH, Calpain 15 shRNA (h) Lentiviral Particles: sc-92995-V and Solh shRNA (m) Lentiviral Particles: sc-153682-V.

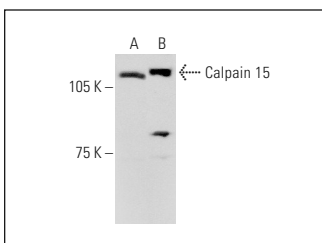
Molecular Weight of Calpain 15: 117 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or A-673 cell lysate: sc-2414.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Calpain 15 (P-15): sc-137361. Western blot analysis of Calpain 15 expression in Hep G2 (A) and A-673 (B) whole cell lysates.

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.