

# Calpain 15 (D-5): sc-514406

## 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

1. Banfi, S., et al. 1996. Identification and mapping of human cDNAs homologous to *Drosophila* mutant genes through EST database searching. *Nat. Genet.* 13: 167-174.
2. Kamei, M., et al. 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.
3. 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/>
4. Farkas, A., et al. 2003. Revisiting ubiquity and tissue specificity of human calpains. *Biol. Chem.* 384: 945-949.

## CHROMOSOMAL LOCATION

Genetic locus: CAPN15 (human) mapping to 16p13.3; Capn15 (mouse) mapping to 17 A3.3.

## SOURCE

Calpain 15 (D-5) is a mouse monoclonal antibody raised against amino acids 1-119 mapping at the N-terminus of Calpain 15 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calpain 15 (D-5) is available conjugated to agarose (sc-514406 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514406 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514406 PE), fluorescein (sc-514406 FITC), Alexa Fluor® 488 (sc-514406 AF488), Alexa Fluor® 546 (sc-514406 AF546), Alexa Fluor® 594 (sc-514406 AF594) or Alexa Fluor® 647 (sc-514406 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514406 AF680) or Alexa Fluor® 790 (sc-514406 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Calpain 15 (D-5) is recommended for detection of Calpain 15 of mouse, rat and human 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 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.

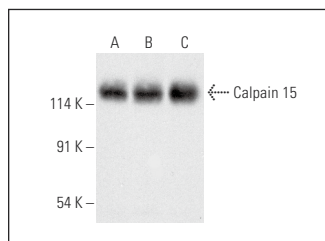
Molecular Weight of Calpain 15: 117 kDa.

Positive Controls: T98G cell lysate: sc-2294, SK-N-MC cell lysate: sc-2237 or SH-SY5Y cell lysate: sc-3812.

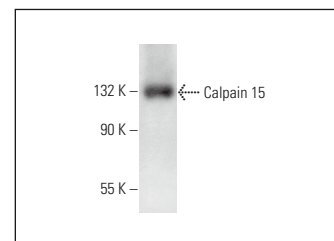
## RECOMMENDED SUPPORT REAGENTS

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 15 (D-5): sc-514406. Western blot analysis of Calpain 15 expression in T98G (A), SK-N-MC (B) and SH-SY5Y (C) whole cell lysates.



Calpain 15 (D-5): sc-514406. Western blot analysis of Calpain 15 expression in WI-38 whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.