

Calpain reg (H-60): sc-30065

BACKGROUND

Calpain 1 is an intracellular calcium-dependent protease that cleaves cytoskeletal and submembranous proteins. Calpains are nonlysosomal, calcium-activated intracellular cysteine proteases. Calpains mediate specific Ca^{2+} -dependent processes including cell fusion, mitosis and meiosis. Calpains are heterodimers of a small regulatory subunit, designated Calpain reg, and one of three large catalytic subunits, designated Calpain 1, Calpain 2 and Calpain p94. Calpastatin regulates Calpain by inhibiting both the proteolytic activity of Calpain and its binding to membranes. Calpastatin exists in two types, tissue type and erythrocyte type, resulting from both alternative splicing and proteolytic processing. Calpain 1 co-localizes with human leukocyte antigen-DR (HLA-DR) on activated microglia in the aging brain. Calpain influences the process of spermatogenesis and the events preceding fertilization, such as the acrosome reaction.

REFERENCES

1. Murachi, T. 1984. Calcium-dependent proteinases and specific inhibitors: calpain and Calpastatin. *Biochem. Soc. Symp.* 45: 149-167.
2. Takano, E., et al. 1991. Molecular diversity of erythrocyte Calpastatin. *Biomed. Biochim. Acta* 50: 517-521.

CHROMOSOMAL LOCATION

Genetic locus: CAPNS1 (human) mapping to 19q13.12; Capns1 (mouse) mapping to 7 B1.

SOURCE

Calpain reg (H-60) is a rabbit polyclonal antibody raised against amino acids 171-230 mapping near the C-terminus of Calpain reg 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.

APPLICATIONS

Calpain reg (H-60) is recommended for detection of calpain regulatory subunit 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).

Calpain reg (H-60) is also recommended for detection of calpain regulatory subunit in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Calpain reg siRNA (h): sc-29887, Calpain reg siRNA (m): sc-29888, Calpain reg shRNA Plasmid (h): sc-29887-SH, Calpain reg shRNA Plasmid (m): sc-29888-SH, Calpain reg shRNA (h) Lentiviral Particles: sc-29887-V and Calpain reg shRNA (m) Lentiviral Particles: sc-29888-V.

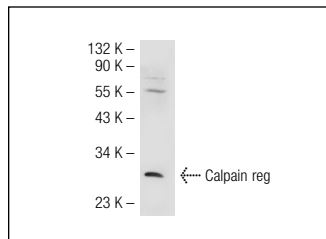
Molecular Weight of Calpain reg: 30 kDa.

Positive Controls: TF-1 cell lysate: sc-2412.

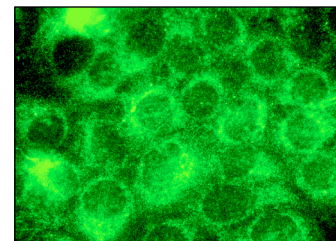
RECOMMENDED SECONDARY REAGENTS

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.

DATA



Calpain reg (H-60): sc-30065. Western blot analysis of Calpain reg expression in TF-1 whole cell lysate.



Calpain reg (H-60): sc-30065. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Vahidnia, A., van der Straaten, R.J., Romijn, F., van Pelt, J., van der Voet, G.B. and de Wolff, F.A. 2008. Mechanism of arsenic-induced neurotoxicity may be explained through cleavage of p35 to p25 by Calpain. *Toxicol. In Vitro* 22: 682-687.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Calpain reg (P-1): sc-32325** or **Calpain reg (5B9): sc-32785**, our highly recommended monoclonal alternatives to Calpain reg (H-60).