

Calpain 7 (H-300): sc-50501

BACKGROUND

Calpains are calcium-activated thiol proteases. Calpain 7 (also known as PalBH) is a member of the non-EF-hand subfamily of calpains and may be calcium-independent. Calpain 7 has 813 amino acid residues and is a divergent member of the calpain family. It has only 26-35% shared identity to other members and most of this homology is in the protease domain. Calpain 7 seems to be related to PalB, an *Aspergillus nidulans* protease that is involved in alkaline ambient pH adaptation. A long N-terminal domain (N) and a PalB homologous domain (PBH) flank the calpain protease domain of Calpain 7. Calpain 7 appears to have an ubiquitous tissue distribution, but is highly expressed in the brain. It localizes to the cytoplasm and the nucleus, but its activated form is found only in the nucleus. Calpain 7 is an atypical calpain that lacks domain IV and cannot form a dimer with the 30 kDa regulatory subunit. Upregulation of Calpain 7 in striatal or cortical tissue of Huntington's disease knock-in mice suggests that this protein may be involved in the onset of the disease.

CHROMOSOMAL LOCATION

Genetic locus: CAPN7 (human) mapping to 3p25.1; Capn7 (mouse) mapping to 14 B.

SOURCE

Calpain 7 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Calpain 7 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Calpain 7 (H-300) is recommended for detection of Calpain 7 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 7 (H-300) is also recommended for detection of Calpain 7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Calpain 7 siRNA (h): sc-62068, Calpain 7 siRNA (m): sc-62069, Calpain 7 shRNA Plasmid (h): sc-62068-SH, Calpain 7 shRNA Plasmid (m): sc-62069-SH, Calpain 7 shRNA (h) Lentiviral Particles: sc-62068-V and Calpain 7 shRNA (m) Lentiviral Particles: sc-62069-V.

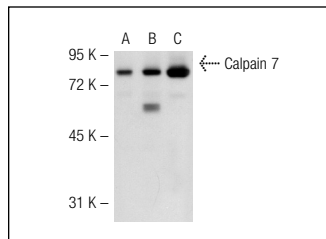
Molecular Weight of Calpain 7: 93 kDa.

Positive Controls: Calpain 7 (m): 293T Lysate: sc-118965, HeLa whole cell lysate: sc-2200 or DU 145 nuclear extract: sc-24960.

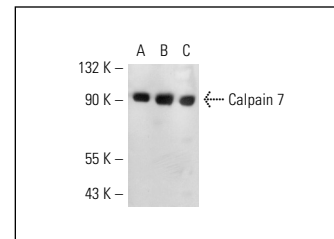
RECOMMENDED SECONDARY REAGENTS

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 7 (H-300): sc-50501. Western blot analysis of Calpain 7 expression in non-transfected 293T: sc-117752 (A), mouse Calpain 7 transfected 293T: sc-118965 (B) and HeLa (C) whole cell lysates.



Calpain 7 (H-300): sc-50501. Western blot analysis of Calpain 7 expression in HeLa (A), MCF7 (B) and DU 145 (C) nuclear extracts.

SELECT PRODUCT CITATIONS

- Liu, H., et al. 2013. CAPN 7 promotes the migration and invasion of human endometrial stromal cell by regulating matrix metalloproteinase 2 activity. *Reprod. Biol. Endocrinol.* 11: 64.

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.



Try **Calpain 7 (B-7): sc-137227** or **Calpain 7 (F-10): sc-515534**, our highly recommended monoclonal alternatives to Calpain 7 (H-300).