SANTA CRUZ BIOTECHNOLOGY, INC.

Calpain 7 (G-19): sc-54695

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-54695 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calpain 7 (G-19) 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 (G-19) is also recommended for detection of Calpain 7 in additional species, including equine, canine, bovine, porcine and avian.

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.

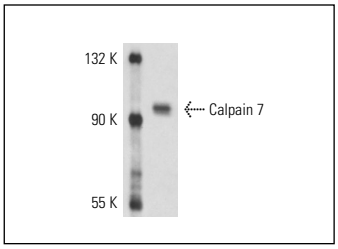
Molecular Weight of Calpain 7: 93 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, HeLa nuclear extract: sc-2120 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 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 7 (G-19): sc-54695. Western blot analysis of Calpain 7 expression in IMR-32 nuclear extract.

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.