

Calpain 5 (S-16): sc-54691

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. Calpain 5, sometimes referred to as HTRA3, belongs to the non-classical calpain subfamily that lacks the EF-hand-calcium-binding structures. Calpain 5 is ubiquitously expressed and localizes to the cytoplasm and nucleus. It is a homolog of Calpain 10. Calpain 5, in addition to Calpain 10 and Calpain 6, differs from other subfamily members by the presence of a T-domain that is homologous to the *Caenorhabditis elegans* protein Tra-3. Calpain 5, the human ortholog of this nematode protein, may play a role in sex determination.

CHROMOSOMAL LOCATION

Genetic locus: CAPN5 (human) mapping to 11q13.5; Capn5 (mouse) mapping to 7 E2.

SOURCE

Calpain 5 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Calpain 5 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-54691 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Calpain 5 (S-16) is recommended for detection of Calpain 5 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 5 (S-16) is also recommended for detection of Calpain 5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Calpain 5 siRNA (h): sc-62064, Calpain 5 siRNA (m): sc-62065, Calpain 5 shRNA Plasmid (h): sc-62064-SH, Calpain 5 shRNA Plasmid (m): sc-62065-SH, Calpain 5 shRNA (h) Lentiviral Particles: sc-62064-V and Calpain 5 shRNA (m) Lentiviral Particles: sc-62065-V.

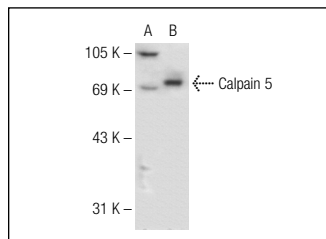
Molecular Weight of Calpain 5: 73 kDa.

Positive Controls: Calpain 5 (h): 293T Lysate: sc-113177, Calpain 5 (m): 293T Lysate: sc-126572 or TF-1 cell lysate: sc-2412.

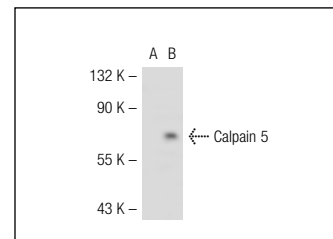
RECOMMENDED SECONDARY REAGENTS

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 5 (S-16): sc-54691. Western blot analysis of Calpain 5 expression in non-transfected: sc-117752 (A) and human Calpain 5 transfected: sc-113177 (B) 293T whole cell lysates.



Calpain 5 (S-16): sc-54691. Western blot analysis of Calpain 5 expression in non-transfected: sc-117752 (A) and mouse Calpain 5 transfected: sc-126572 (B) 293T whole cell lysates.

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 5 (A-5): sc-271271**, our highly recommended monoclonal alternative to Calpain 5 (S-16).