

Calpain 5 (D-18): sc-54693

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.

REFERENCES

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RESEARCH USE

For research use only, not for use in diagnostic procedures.

CHROMOSOMAL LOCATION

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

SOURCE

Calpain 5 (D-18) 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-54693 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calpain 5 (D-18) 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), 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 (D-18) is also recommended for detection of Calpain 5 in additional species, including canine, bovine 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: TF-1 cell lysate: sc-2412 or HeLa whole cell lysate: sc-2200.

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) 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.