

Calpain 11 (D-20): sc-54774

BACKGROUND

Calpains are calcium-activated thiol proteases. They are heterodimers with one large subunit and one small subunit. The large subunit varies between family members and can be active without the small subunit. Calpains are involved in intracellular processing of proteins. Calpain 11 is a typical calpain with four domains, but in place of the typical domain IV is a similar calmodulin-like domain that associates but does not interact with the smaller regulatory subunit. Calpain 11 is found in the testis, localizing to the spermatozoa during the later stages of meiosis. It is expressed during spermatogenesis, which suggests that during meiosis and sperm functional processes Calpain 11 may regulate calcium dependent signal transduction events.

REFERENCES

1. Dear, T.N., et al. 1999. Diverse mRNA expression patterns of the mouse calpain genes Capn5, Capn6 and Capn11 during development. *Mech. Dev.* 89: 201-209.
2. Huang, Y., et al. 2001. The calpain family and human disease. *Trends Mol. Med.* 7: 355-362.
3. Gafni, J., et al. 2004. Inhibition of calpain cleavage of Huntingtin reduces toxicity: accumulation of calpain/caspase fragments in the nucleus. *J. Biol. Chem.* 279: 20211-20220.
4. Suzuki, K., et al. 2004. Structure, activation, and biology of calpain. *Diabetes* 53: S12-S18.
5. Ben-Aharon, I., et al. 2006. Calpain 11 is unique to mouse spermatogenic cells. *Mol. Reprod. Dev.* 73: 767-773.
6. Hou, S.T., et al. 2006. Calpain-cleaved collapsin response mediator protein-3 induces neuronal death after glutamate toxicity and cerebral ischemia. *J. Neurosci.* 26: 2241-2249.
7. Saez, M.E., et al. 2006. The therapeutic potential of the calpain family: new aspects. *Drug Discov. Today* 11: 917-923.
8. Das, A., et al. 2006. Mechanism of apoptosis with the involvement of calpain and caspase cascades in human malignant neuroblastoma SH-SY5Y cells exposed to flavonoids. *Int. J. Cancer* 119: 2575-2585.
9. Huh, J.W., et al. 2006. Regionally distinct patterns of calpain activation and traumatic axonal injury following contusive brain injury in immature rats. *Dev. Neurosci.* 28: 466-476.

CHROMOSOMAL LOCATION

Genetic locus: CAPN11 (human) mapping to 6p21.1.

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.

SOURCE

Calpain 11 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Calpain 11 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-54774 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calpain 11 (D-20) is recommended for detection of Calpain 11 of 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).

Suitable for use as control antibody for Calpain 11 siRNA (h): sc-62058, Calpain 11 shRNA Plasmid (h): sc-62058-SH and Calpain 11 shRNA (h) Lentiviral Particles: sc-62058-V.

Molecular Weight of Calpain 11: 81 kDa.

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.

RESEARCH USE

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



Try **Calpain 11 (C-2): sc-376265** or **Calpain 11 (C-10): sc-376213**, our highly recommended monoclonal alternatives to Calpain 11 (D-20).