

# Calpain 11 (C-10): sc-376213

## 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.

## SOURCE

Calpain 11 (C-10) is a mouse monoclonal antibody raised against amino acids 1-60 mapping at the N-terminus of Calpain 11 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Calpain 11 (C-10) is recommended for detection of Calpain 11 of human origin by Western Blotting (starting dilution 1:100, 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).

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.

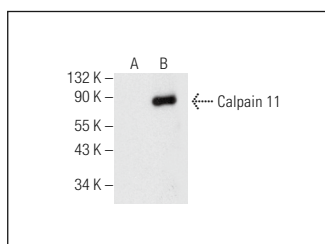
Molecular Weight of Calpain 11: 81 kDa.

Positive Controls: Calpain 11 (h): 293T Lysate: sc-115046.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Calpain 11 (C-10): sc-376213. Western blot analysis of Calpain 11 expression in non-transfected: sc-117752 (A) and human Calpain 11 transfected: sc-115046 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.