

Calpain 11 (C-2): sc-376265

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.

CHROMOSOMAL LOCATION

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

SOURCE

Calpain 11 (C-2) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calpain 11 (C-2) is available conjugated to agarose (sc-376265 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376265 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376265 PE), fluorescein (sc-376265 FITC), Alexa Fluor® 488 (sc-376265 AF488), Alexa Fluor® 546 (sc-376265 AF546), Alexa Fluor® 594 (sc-376265 AF594) or Alexa Fluor® 647 (sc-376265 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376265 AF680) or Alexa Fluor® 790 (sc-376265 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Calpain 11 (C-2) 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), immunohistochemistry (including paraffin-embedded sections) (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.

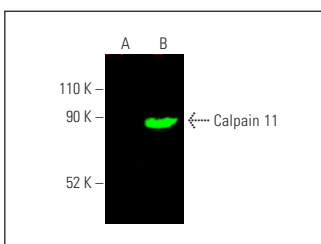
Molecular Weight of Calpain 11: 81 kDa.

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

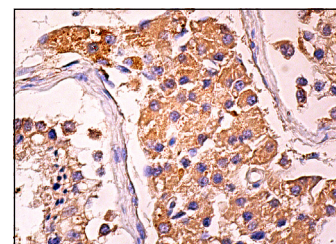
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Calpain 11 (C-2): sc-376265. Near-Infrared 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. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 680: sc-542739.



Calpain 11 (C-2): sc-376265. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

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.

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