SANTA CRUZ BIOTECHNOLOGY, INC.

Calpain 2 (C-19): sc-7532

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Calpain, an intracellular calcium-dependent protease that cleaves cytoskeletal and submembranous proteins, is thought to play a role in cytoskeletal reorganization and muscle protein degradation. Calpain exists as a heterodimer composed of a small regulatory subunit and one of three large catalytic subunits, designated Calpain 1, Calpain 2 and Calpain p94. Calpastatin regulates Calpain by inhibiting both the proteolytic activity of Calpain and its binding to membranes. Calpastatin exists in two types, tissue type and erythrocyte type, resulting from both alternative splicing and proteolytic processing.

CHROMOSOMAL LOCATION

Genetic locus: CAPN2 (human) mapping to 1q41; Capn2 (mouse) mapping to 1 H5.

SOURCE

Calpain 2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Calpain 2 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-7532 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calpain 2 (C-19) is recommended for detection of Calpain 2 catalytic subunit 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 2 (C-19) is also recommended for detection of Calpain 2 catalytic subunit in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Calpain 2 siRNA (h): sc-41459, Calpain 2 siRNA (m): sc-41460, Calpain 2 siRNA (r): sc-60100, Calpain 2 shRNA Plasmid (h): sc-41459-SH, Calpain 2 shRNA Plasmid (m): sc-41460-SH, Calpain 2 shRNA Plasmid (r): sc-60100-SH, Calpain 2 shRNA (h) Lentiviral Particles: sc-41459-V, Calpain 2 shRNA (m) Lentiviral Particles: sc-41460-V and Calpain 2 shRNA (r) Lentiviral Particles: sc-60100-V.

Molecular Weight of Calpain 2 large regulatory subunit: 80 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or TF-1 cell lysate: sc-2412.

RESEARCH USE

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

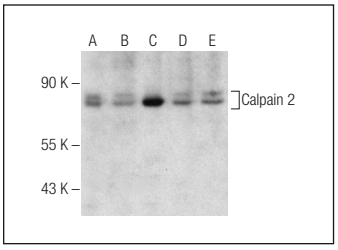
PROTOCOLS

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

STORAGE

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

DATA



Calpain 2 (C-19): sc-7532. Western blot analysis of Calpain 2 expression in TF-1 (**A**), K-562 (**B**), A-431 (**C**), T-47D (**D**) and PC-3 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mamoune, A., et al. 2003. Calpain 2 as a target for limiting prostate cancer invasion. Cancer Res. 63: 4632-4640.
2. Orzechowski, A., et al. 2003. Delineation of signalling pathway leading to antioxidant-dependent inhibition of dexamethasone-mediated muscle cell death. J. Muscle Res. Cell Motil. 24: 33-53.
3. Taveau, M., et al. 2003. Calpain 3 is activated through autolysis within the active site and lyses sarcomeric and sarcolemmal components. Mol. Cell. Biol. 23: 9127-9135.
4. Tremper-Wells, B., et al. 2005. Nuclear Calpain regulates Ca^{2+}-dependent signaling via proteolysis of nuclear Ca^{2+}/calmodulin-dependent protein kinase type IV in cultured neurons. J. Biol. Chem. 280: 2165-2175.
5. Hastie, C., et al. 2008. Interferon-γ reduces cell surface expression of annexin 2 and suppresses the invasive capacity of prostate cancer cells. J. Biol. Chem. 283: 12595-12603.
6. Amanchy, R., et al. 2009. Identification of c-Src tyrosine kinase substrates in platelet-derived growth factor receptor signaling. Mol. Oncol. 3: 439-450.
7. Bastián, Y., et al. 2010. Calpain modulates capacitation and acrosome reaction through cleavage of the spectrin cytoskeleton. Reproduction 140: 673-684.
8. Leloup, L., et al. 2010. µ-Calpain activation is regulated by its membrane localization and by its binding to phosphatidylinositol 4,5-bisphosphate. J. Biol. Chem. 285: 33549-33566.