

Calpastatin (PI-9): sc-81172

BACKGROUND

Calpains are nonlysosomal, calcium-activated intracellular cysteine proteases that mediate specific Ca²⁺-dependent processes including cell fusion, mitosis and meiosis. Calpains are heterodimers of a small regulatory subunit and one of three large catalytic subunits, designated Calpain 1, Calpain 2 and Calpain p94. Calpain 1 is an intracellular calcium-dependent protease that cleaves cytoskeletal and submembranous proteins. Calpain 1 co-localizes with human leukocyte antigen-DR (HLA-DR) on activated microglia in the aging brain. Calpain influences the process of spermatogenesis and the events preceding fertilization, such as the acrosome reaction. 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.

REFERENCES

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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 for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: CAST (human) mapping to 5q15.21.

SOURCE

Calpastatin (PI-9) is a mouse monoclonal antibody raised against erythrocyte Calpastatin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Calpastatin (PI-9) is recommended for detection of Calpastatin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Calpastatin siRNA (h): sc-29889, Calpastatin shRNA Plasmid (h): sc-29889-SH and Calpastatin shRNA (h) Lentiviral Particles: sc-29889-V.

Molecular Weight of Calpastatin: 126 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RESEARCH USE

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