

PCPE-1 (7A11/5): sc-73000

BACKGROUND

Fibrillar collagen proteins are synthesized as procollagens that contain carboxyl- and amino-terminal peptide extensions (C- and N-propeptides). As procollagen is secreted from cells, these propeptides are cleaved and form mature helical fibrils. Procollagen C-endopeptidase enhancer-1 precursor (PCPE-1), also designated Type I procollagen COOH-terminal proteinase enhancer or PCOLCE, binds to the C-terminal propeptide of Type I procollagen. It is an extracellular matrix glycoprotein that can heighten the activity of procollagen C-proteinase in a substrate-specific way. PCPE-1 can greatly stimulate the action of tolloid metalloproteinases during procollagen processing. Expression of PCPE-1 has been shown to be highest in type I collagen-rich connective tissues such as skin and tendon.

REFERENCES

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2. Scott, I.C., et al. 1999. Structural organization and expression patterns of the human and mouse genes for the type I procollagen COOH-terminal proteinase enhancer protein. *Genomics* 55: 229-234.
3. Mott, J.D., et al. 2000. Post-translational proteolytic processing of procollagen C-terminal proteinase enhancer releases a metalloproteinase inhibitor. *J. Biol. Chem.* 275: 1384-1390.
4. Baker, A.H., et al. 2002. Metalloproteinase inhibitors: biological actions and therapeutic opportunities. *J. Cell. Sci.* 115: 3719-3727.
5. Ricard-Blum, S., et al. 2002. Interaction properties of the procollagen C-proteinase enhancer protein shed light on the mechanism of stimulation of BMP-1. *J. Biol. Chem.* 277: 33864-33869.
6. Bernocco, S., et al. 2003. Low resolution structure determination shows procollagen C-proteinase enhancer to be an elongated multidomain glycoprotein. *J. Biol. Chem.* 278: 7199-7205.
7. Moali, C., et al. 2005. Substrate-specific modulation of a multisubstrate proteinase. C-terminal processing of fibrillar procollagens is the only BMP-1-dependent activity to be enhanced by PCPE-1. *J. Biol. Chem.* 280: 24188-24194.

CHROMOSOMAL LOCATION

Genetic locus: PCOLCE (human) mapping to 7q22.1; Pcolce (mouse) mapping to 5 G2.

SOURCE

PCPE-1 (7A11/5) is a mouse monoclonal antibody raised against recombinant PCPE-1 of human origin.

PRODUCT

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

APPLICATIONS

PCPE-1 (7A11/5) is recommended for detection of the NTR domain of PCPE-1 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

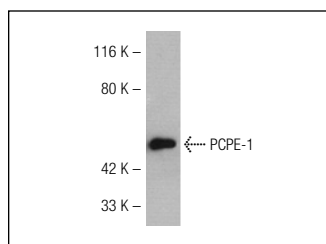
Suitable for use as control antibody for PCPE-1 siRNA (h): sc-45728, PCPE-1 siRNA (m): sc-45729, PCPE-1 shRNA Plasmid (h): sc-45728-SH, PCPE-1 shRNA Plasmid (m): sc-45729-SH, PCPE-1 shRNA (h) Lentiviral Particles: sc-45728-V and PCPE-1 shRNA (m) Lentiviral Particles: sc-45729-V.

Molecular Weight of PCPE-1 precursor: 55 kDa.

Molecular Weight of PCPE-1 amino-terminal forms: 36/34 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263 or BJ whole cell lysate.

DATA



PCPE-1 (7A11/5): sc-73000. Western blot analysis of purified human recombinant PCPE-1. Kindly provided by Prof. Efrat Kessler, Tel-Aviv University.

SELECT PRODUCT CITATIONS

1. Weiss, T., et al. 2010. Binding of procollagen C-proteinase enhancer-1 (PCPE-1) to heparin/heparan sulfate: properties and role in PCPE-1 interaction with cells. *J. Biol. Chem.* 285: 33867-33874.

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 for detailed protocols and support products.