SANTA CRUZ BIOTECHNOLOGY, INC.

PCPE-1 (K-18): sc-47315

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Takahara, K., et al. 1994. Type I procollagen COOH-terminal proteinase enhancer protein: identification, primary structure, and chromosomal localization of the cognate human gene (PCOLCE). J. Biol. Chem. 269: 26280-26285.
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.

CHROMOSOMAL LOCATION

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

SOURCE

PCPE-1 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PCPE-1 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-47315 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PCPE-1 (K-18) is recommended for detection 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)], 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).

PCPE-1 (K-18) is also recommended for detection of PCPE-1 in additional species, including equine, canine, bovine and porcine.

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.

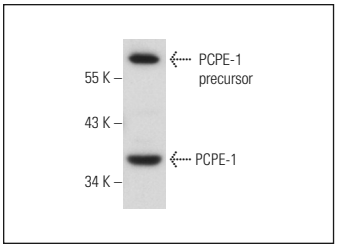
Molecular Weight of PCPE-1 amino-terminal forms: 36/34 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263 or BJ whole cell lysate: sc-364359.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PCPE-1 (K-18): sc-47315. Western blot analysis of PCPE-1 expression in CCD-1064Sk whole cell lysate.

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 or our catalog for detailed protocols and support products.