

PCPE-1 (10D9): sc-73002



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.

CHROMOSOMAL LOCATION

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

SOURCE

PCPE-1 (10D9) is a mouse monoclonal antibody raised against recombinant PCPE-1 of human origin.

PRODUCT

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

PCPE-1 (10D9) is available conjugated to agarose (sc-73002 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-73002 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-73002 PE), fluorescein (sc-73002 FITC), Alexa Fluor® 488 (sc-73002 AF488), Alexa Fluor® 546 (sc-73002 AF546), Alexa Fluor® 594 (sc-73002 AF594) or Alexa Fluor® 647 (sc-73002 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-73002 AF680) or Alexa Fluor® 790 (sc-73002 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PCPE-1 (10D9) is recommended for detection of the CUB2 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (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 active precursor: 55 kDa.

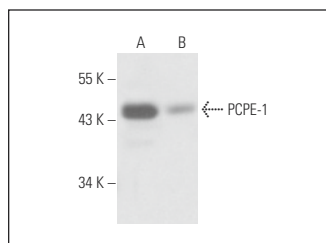
Molecular Weight of PCPE-1 active amino-terminal forms: 36/34 kDa.

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

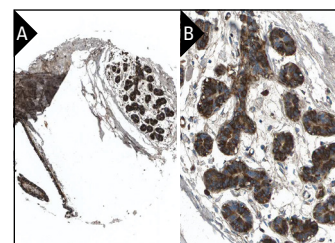
RECOMMENDED SUPPORT REAGENTS

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



PCPE-1 (10D9): sc-73002. Western blot analysis of PCPE-1 expression in CCD-1064Sk (A) and BJ (B) whole cell lysates.



PCPE-1 (10D9): sc-73002. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Li, K., et al. 2023. Osteosarcoma-enriched transcripts paradoxically generate osteosarcoma-suppressing extracellular proteins. *Elife* 12: e83768.
- Lao, H., et al. 2024. Characteristics of spatial protein expression in the mouse cochlear sensory epithelia: Implications for age-related hearing loss. *Hear. Res.* 446: 109006.

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.