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ProductInformation

Anti-Procollagen C-Proteinase Enhancer Protein-1
Developed in Rabbit
Affinity Isolated Antibody

Product Number **P 6243**

Product Description

Anti-Procollagen C-Proteinase Enhancer Protein-1 (PCOLCE, PCPE, PCOLE-1) is developed in rabbit using a synthetic peptide corresponding to the end of CUB-2 and the beginning of the "linker" region of human procollagen C-proteinase enhancer protein-1 as immunogen. Affinity isolated antigen specific antibody is obtained from rabbit anti-PCOLE-1 antiserum by immuno-specific purification which removes essentially all rabbit serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Procollagen C-Proteinase Enhancer Protein-1 may be used for the detection and localization of human, mouse, and porcine PCOLE-1 by immunoblotting. The antibody recognizes both full-sized and cleaved PCOLE-1. Anti-PCOLE-1 does not react with PCOLE-2.

Mature Procollagen C-Proteinase Enhancer Protein-1 is seen as a 50-55 kDa protein in SDS-PAGE under reducing conditions. Proteolytic removal of the C-terminal end generates 34 and 36 kDa active fragments. The human protein is 449 amino acids in length and the mouse protein is 468 amino acids.

BMP-1, also known as Bone Morphogenetic Protein-1, Procollagen C-endopeptidase, Procollagen C-peptidase, or Procollagen C-proteinase, is an extracellular zinc endopeptidase of the astacin family. PCOLE-1 was described as an accessory protein that enhances the activity of BMP-1.[1, 2] Another BMP-1 enhancer protein, PCOLE-2, was described in a subtractive library of eye tissue,[3] and little is known about its function. PCOLE-1 binds to Procollagen and assists BMP-1, increasing the Type-I Procollagen C-Terminal processing activity 10-fold, although it does not directly activate the enzyme. BMP-1 is produced in a number of different forms, with different C-terminal regions. PCOLE-1 and -2 may be isoform- or tissue-specific enhancers, giving a degree of regulation to the activity of BMP-1 in different circumstances. PCOLE-1 is produced in tissues rich in Type-I collagen, such as skin, kidney and tendon. It is secreted into culture media by a wide range of cell types.

Reagent

Anti-Procollagen C-Proteinase Enhancer Protein-1 is supplied in phosphate buffered saline containing 50% glycerol and 0.05% sodium azide. The protein concentration is approximately 1 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to six months. For extended storage, the solution may be stored –20 °C. Do not store below –22 °C. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

A minimum working antibody dilution of 1:1,000 is determined by immunoblotting a tissue cell lysate with an alkaline phosphatase conjugated secondary antibody and BCIP/NBT as the substrate. A starting dilution of 1:5,000 of the antibody is recommended for chemiluminescent substrates

Note: Higher antibody dilutions may be necessary for non-human samples. EDTA/EGTA treatment of tissues or lysates is required to see latent zymogen.

In order to obtain the best results and assay sensitivity in various techniques and preparations we recommend determining optimum working dilutions by titration.

References

1. Kessler, E., and Adar, R., Eur. J. Biochem., **186**, 156-121 (1989).
2. Takahara, K., et al., J. Biol. Chem., **269**, 26280-26285 (1994).
3. Xu, H., et al., Genomics, **66**, 264-273 (2000).

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