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Product Information

Monoclonal Anti-PCPE-1, Clone 7A11/1
produced in mouse, purified immunoglobulin

Catalog Number **C2122**

Product Description

Monoclonal Anti-PCPE-1 (mouse IgG1 isotype) is derived from the hybridoma 7A11/1 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized purified human, recombinant PCPE-1 (Gene ID 5118) expressed by HEK-293 cells (serum-free media). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-PCPE-1 reacts with human and mouse PCPE-1. The antibody epitope resides within the CUB2 domain of PCPE-1. The antibody may be used in various immunochemical techniques including ELISA, immunoblotting (~50 kDa), immunoprecipitation, and immunofluorescence.

Fibrillar collagen types I-III are synthesized as precursor molecules known as procollagens. These precursors contain amino- and carboxyl-terminal peptide extensions known as N- and C-propeptides, respectively, which are cleaved, upon secretion of procollagen from the cell, to yield the mature triple helical, highly structured collagen fibrils.[1] PCPE-1 (Procollagen C-proteinase enhancer), also designated PCOLCE (type I procollagen COOH-terminal proteinase enhancer), is an extracellular glycoprotein that binds to and potentiates the cleavage of the C-propeptide of type I procollagen by procollagen C-proteinase(s) in a substrate-specific manner, reaching a maximum at approximately one molecule of PCPE per one molecule of procollagen.[2,3] PCPE-1 can stimulate the action of procollagen C-proteinases (PCPs) like BMP-1 and mTld (mammalian tolloid).[4] PCPE-1 is abundant in connective tissues rich in collagen I such as bones and tendons. It is also present in heart, skeletal muscles and kidney, but is barely detectable in tissues such as brain and liver that contain little or no fibrillar collagen.[5] Nevertheless, it is expressed in cirrhotic liver, suggesting its role in fibrotic processes.[6] Furthermore, PCPE-1 was found to play a major role in the remodeling myocardium after infarction.[7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discard if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 4-8 µg/mL is recommended using HS-68 cell extract in non-reduced conditions.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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