Procollagen Type I C-Peptide (PIP) Monoclonal Antibodies

ORDERING INFORMATION

Catalog nos.: **42024** (clone PC5-5) and **42043** (clone PC8-7)
Format: 100 µg IgG in 10mM PBS, pH 7.4, 1% BSA, lyophilized.

BACKGROUND

Collagens (types I, II, III, IV, and V) are synthesized as precursor molecules called procollagens. These contain additional peptide sequences, the “propeptides”, at the amino- and carboxy-terminal ends. Propeptides facilitate the winding of procollagen molecules into a triple-helix conformation within the endoplasmic reticulum. These propeptides are cleaved from the collagen triple helix during its secretion after which the collagens polymerize into extracellular collagen fibrils. Therefore, the amount of free propeptides correlates directly with collagen molecule synthesis. Procollagen Type I C-peptide (PIP) has been extensively referenced in studies that correlated collagen levels and disorders such as bone disease, alcoholic liver disease, liver cirrhosis, and scirrhous (Borrmann type IV) adenocarcinoma of the stomach.

SPECIFICATION SUMMARY

Antigen: Human Procollagen Type I C-Peptide
Host Species: Mouse
Antibody Class: IgG1
Specificity: These antibodies recognize non-denatured human, bovine, canine, and equine Procollagen Type I C-peptide. They do not react with rat or rabbit Procollagen Type 1 C-peptide.

APPLICATIONS

ELISA: 0.2ug/ml with solid phase antigen. For sandwich ELISA, use 42043 on the solid phase and labeled 42024 for detection of binding.
Western Blot: 10ug/ml under non-reducing and non-heating conditions.
Immunohistochemistry: 10ug/ml on cultured cells, frozen and paraffin-embedded tissue sections (Antigen retrieval: Proteinase K treatment).

DILUTION INSTRUCTIONS

Dissolve lyophilized antibody in 50ul of distilled water (final concentration 2.0mg/ml).

STORAGE AND STABILITY

This product does not contain preservative. The stock solution (2.0mg/ml) can be stored in aliquots at -20^{o}C for 1 year or can be stored at 4^{o}C for 6 months after adding 0.1% sodium azide. Dilutions of stock solution should not be stored. Avoid repeated freeze-thaw cycles.

PRODUCT REFERENCES

Ang XM et al. *Macromolecular Crowding Amplifies Adipogenesis of Human Bone Marrow-Derived Mesenchymal Stem Cellsby Enhancing the Pro-Adipogenic Microenvironment.* Tissue Engineering Part A Volume 20: 966, 2014. ***Western blotting***

Gorur A. et al. *COPII-coated membranes function as transport carriers of intracellular procollagen I*. J Cell Biol April 20, 2017, PMID 28428367. ***Immunofluorescence.***