

Procollagen

The following tests are available:

- **Procollagen I-carboxy-terminal propeptide**

General:

PICP is a glycoprotein with a molecular weight of 100,000 and arises from extracellular separation of pro-collagen molecules, which are synthesized in osteoblasts during bone formation. An increased PICP value reflects increased bone reorganization (resorption). PICP is biotransformed in endothelial cells of the liver and in tissue macrophages and is subject to a circadian rhythm.

Indication: Increased bone reorganization (resorption), e.g. osteoporosis

Material: 1 ml serum

Preamalytics: morning collection is recommended, transport stability (4-20°C) approx. 1 week

TAT: 7-10 days*

Method: ECL

Units: µg/l

Ref.- range: see report

- **Procollagen I-N-terminal propeptide**

General:

P1NP, aminoterminal propeptide of type I procollagen exists in serum as intact, trimeric aminoterminal propeptides. The P1NP concentration is directly proportional to the amount of new collagen and has emerged as a reliable marker of bone turnover. It is routinely used to monitor bone formation and the growth response to growth hormone treatment. A useful combination is to use the test with a marker of bone resorption, such as crosslinks.

Concentrations are increased in patients with various bone diseases, including bone metastases and by therapies, which are characterized by increased osteoblastic activity. If the pre-treatment baseline level of bone formation is already high, a therapy to increase bone formation might not be necessary. If the relative levels of bone formation and bone resorption do not improve during therapy, another therapy must be considered.

Indication: to obtain a baseline level prior to antiresorptive or bone formation therapy, monitoring of the effectiveness of antiresorptive or bone formation therapy, e.g. in osteoporosis, breast and prostate cancer, bone formation/ resorption, growth hormone treatment

Material: 1 ml serum

TAT: 7-10 days*

Method: ECL

Units: $\mu\text{g/l}$

Ref.- range: see report

- **Procollagen III-propeptide**

General:

Collagen is formed initially with propeptides at both ends. In the liver the majority of collagen is either type 1 or type 3. The removal of the propeptides promotes development of collagen fibrils. The propeptides may either be retained in the matrix or released into the circulation.

Fibrosis of liver cells occurs in the deposition of collagen and release of propeptides, predominantly P3NP. Increased P3NP is seen in various liver diseases in which fibrosis/cirrhosis occur e.g. alcoholic liver disease, primary sclerosing cholangitis but also in myelofibrosis, systemic sclerosis etc. The test is useful for recognizing an early degenerative alteration of the liver tissue prior to loss of functional activity. This test is designed as a follow-up control rather than for primary diagnosis or screening.

Indication: Therapy monitoring in degenerative liver diseases, monitoring for hepatic fibrosis, particularly in patients receiving methotrexate treatment

Material: 1 ml serum

TAT: 7-10 days*

Method: EIA

Units: $\mu\text{g/l}$

Ref.- range: 2.9 - 8.1

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>