

Osteocalcin

General:

Osteocalcin (bone-gamma carboxyglutamic acid containing protein) is vitamin K-dependent and can be stimulated by 1,25-dihydroxy vitamin D. It is a hydroxyapatite-binding protein with the molecular mass of 5000 Dalton. OC is exclusively synthesized by osteoblasts during the phase of matrix mineralization and is therefore considered a specific marker of the osteoblastic function or of the osteoidal mineralization.

The serum levels correlate well with the bone formation rate in histomorphometric investigations. OC has a half-life of 4 min. and is predominantly secreted renally so that it can result in accumulation and thus lead to misinterpretations in case of kidney insufficiency. Serum OC shows clear diurnal fluctuations with high values in the early mid-day. Monitoring should consider the collection time.

Indication: Suspicion of osteoporosis, carcinoma with bone metastases, primary hyperparathyroidism, renal osteopathy, further clarification in case of increased alkaline phosphatase values.

Preanalytics: blood collection fasting in the morning between 8.00 and 9.00 am, fast processing, since OC shows a clear decline of immune reactivity within a few hours at room temperature. For longer transport: serum, frozen

Material: 1 ml serum, **frozen**

TAT: 5-7 days*

Method: ECL

Units: ng/ml

Ref.- range: see report

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