

Procalcitonin: Biochemistry and Clinical Diagnosis

Procalcitonin is a peptide hormone that is produced by the thyroid gland. It is involved in calcium metabolism and has recently been shown to be a useful biomarker for infections. This article reviews the biochemistry and clinical applications of procalcitonin.



Procalcitonin - Biochemistry and Clinical Diagnosis

(UNI-MED Science) by Michael Meisner

★★★★☆ 4.1 out of 5

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Biochemistry

Procalcitonin is a 116-amino acid peptide that is produced by the thyroid gland. It is a precursor to calcitonin, a hormone that is involved in calcium metabolism. Procalcitonin is secreted in response to high levels of calcium in the blood. It is also produced by other tissues, including the lungs, kidneys, and intestines.

The exact mechanism of action of procalcitonin is not fully understood. However, it is thought to play a role in calcium metabolism and bone formation. Procalcitonin may also have antimicrobial effects.

Clinical Applications

Procalcitonin has been shown to be a useful biomarker for infections. It is elevated in a variety of infections, including sepsis, pneumonia, and meningitis. Procalcitonin levels can help to distinguish between bacterial and viral infections. They can also be used to monitor the severity of infection and to guide antibiotic therapy.

Procalcitonin is typically measured in the blood. Levels below 0.5 ng/mL are considered normal. Levels between 0.5 and 2 ng/mL are considered intermediate, and levels above 2 ng/mL are considered high.

High procalcitonin levels are associated with an increased risk of death from infection. Procalcitonin levels can also be used to guide antibiotic therapy. Antibiotics are typically recommended for patients with high procalcitonin levels.

Procalcitonin is a promising biomarker for infections. It is elevated in a variety of infections, and it can be used to distinguish between bacterial and viral infections. Procalcitonin levels can also be used to monitor the severity of infection and to guide antibiotic therapy.

Further research is needed to fully understand the role of procalcitonin in infection. However, current evidence suggests that procalcitonin is a valuable tool for the diagnosis and management of infections.

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