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Recombinant Human Procalcitonin (PCT)

Synonyms

Calcitonin 1, CALC1, calcitonin/calcitonin-related polypeptide, alpha.

Description

Procalcitonin (PCT) is a peptide precursor of the hormone calcitonin. The mature calcitonin is composed of 116 amino acids and plays an important role in calcium homeostasis. Calcitonin is mainly produced by parafollicular C cells of the thyroid and the endocrine cells of the intestine and lung. Calcitonin causes a rapid but short-lived drop in the level of calcium and phosphate in blood by promoting the incorporation of those ions in the bones. Procalcitonin levels may be useful to distinguish bacterial infections from nonbacterial infections.

Source

- Recombinant protein, purified from *Escherichia coli*.
- Protein Accession No. AAH69760.

Preparation

The gene encoding human procalcitonin protein (Ala 26-Asn 141) without the signal peptide was cloned and expressed in *E. coli*. The recombinant procalcitonin protein was purified by proprietary chromatographic techniques.

Predicted Molecular Mass

~ 13 kDa.

Concentration

Lot specific (see the label on the vial).

Formulation

Liquid, clear solution. Supplied as a 0.2 μ m filtered solution of 50 mM Tris-HCl, pH 8.0, 20 mM NaCl containing 20% glycerol.

Purity

>95%, determined by SDS-PAGE and stained with Coomassie blue. (See image below).



Stability & Storage

Upon arrival, the protein should be stored at 4°C for one week. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store at -20 or -80°C. **Please avoid repeated freeze-thaw cycles.**

References

- Dandona P, Nix D, Wilson MF, et al. (1994) Procalcitonin increase after endotoxin injection in normal subjects. *J. Clin. Endocrinol. Metab.* 79 (6): 1605–8.
- Brunkhorst FM, Al-Nawas B, Krummenauer F, et al. (2002) Procalcitonin, C-reactive protein and APACHE II score for risk evaluation in patients with severe pneumonia. *Clin. Microbiol. Infect.* 8 (2): 93–100.
- Christ-Crain M, Jaccard-Stolz D, Bingisser R, et al. (2004) Effect of procalcitonin-guided treatment on antibiotic use and outcome in lower respiratory tract infections: cluster-randomised, single-blinded intervention trial. *Lancet* 363 (9409): 600–7.
- Jones AE, Fiechtel JF, Brown MD, et al. (2007) Procalcitonin test in the diagnosis of bacteremia: a meta-analysis. *Annals of emergency medicine* 50 (1): 34–41.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**