

Recombinant Human PCT/Procalcitonin

#R00480

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Procalcitonin (PCT) belongs to a group of related proteins including calcitonin gene-related peptides I and II, amylin, adrenomodulin and calcitonin (CAPA peptide family). PCT, like other peptides of CAPA family, appears from the common precursor pre-procalcitonin consisting of 141 amino acids by removal of 25 amino acids from the N-terminus. PCT undergoes successive cleavages to form three molecules: N-terminal fragment (55 a.a.), calcitonin (32 a.a.) and katecalcitonin (21 a.a.). PCT is a peptide precursor of the hormone calcitonin, the latter being involved with calcium homeostasis. PCT is produced by parafollicular cells (C cells) of the thyroid and by the neuroendocrine cells of the lung and the intestine. But its level is related to the severity of bacterial sepsis, it is considered to be one of the earliest and most specific markers of sepsis.

AA Sequence

APFRSALESSPADPATLSEDEARLLLAALVQDYVQMK
ASELEQEQEREGSSLDSPRSKRCGNLSTCMLGTYT
QDFNKFHTFPQTAIGVGAPGKKRDMSSDLERDHRPH
VSMPQNNAN

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 12.8 kDa, a single non-glycosylated polypeptide chain containing 116 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Bioassay data are not available.
Physical Appearance	Sterile Filtered White Lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris-HCl, pH 8.0, 150 mM NaCl.
Endotoxin	Less than 0.1 EU/µg of rHuPCT/Procalcitonin as determined by LAL method.