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Mouse Anti-Procalcitonin (PCT)antibody

SLM-41144M

Product Name	Procalcitonin(PCT)
Chinese Name	降钙素原单克隆抗体
Alias	Calcitonin; CALCA; Calcitonin carboxyl-terminal peptide; CCP; Katacalcin; PDN-21; CALC1;
Research Area	Cardiovascular immunology Signal transduction Growth factors and hormones
Immunogen Species	Mouse
Clonality	Monoclonal
React Species	Human
Applications	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	13kDa
Cellular localization	Secretory protein
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant human Procalcitonin: 26-141aa
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed
Product Detail	Procalcitonin (PCT) is a peptide precursor of the hormone calcitonin, the latter being involved with calcium homeostasis. It arises once preprocalcitonin is

cleaved by endopeptidase. It is composed of 116 amino acids and is produced by parafollicular cells (C cells) of the thyroid and by the neuroendocrine cells of the lung and the intestine.

Function:
The level of procalcitonin in the blood stream of healthy individuals is below the limit of detection (1 μg/L) of clinical assays. The level of procalcitonin rises in a response to a proinflammatory stimulus, especially of bacterial origin. It does not rise significantly with viral or non-infectious inflammations. With the derangements that a severe infection with an associated systemic response brings, the blood levels of procalcitonin may rise to 100 μg/L. In serum, procalcitonin has a half-life of 25 to 30 hours. Remarkably the high procalcitonin levels produced during infections are not followed by a parallel increase in calcitonin or a decrease in serum calcium levels.

DISEASE:
Sepsis: Measurement of procalcitonin can be used as a marker of severe sepsis caused by bacteria and generally grades well with the degree of sepsis, although levels of procalcitonin in the blood are very low. PCT has the greatest sensitivity (85%) and specificity (91%) for differentiating patients with systemic inflammatory response syndrome (SIRS) from those with sepsis, when compared with IL-2, IL-6, IL-8, CRP and TNF-alpha. Evidence is emerging that procalcitonin levels can reduce unnecessary antibiotic prescribing to people with lower respiratory tract infections. Currently, procalcitonin assays are widely used in the clinical environment.
Pneumonia: Procalcitonin levels may be useful to distinguish bacterial infections from nonbacterial infections. This may help guide antibiotic use, which can help save on cost and drug resistance.
Kidney disease: Patients with chronic kidney disease and end-stage renal disease are at higher risk for infections, and procalcitonin has been studied in these populations, who often have higher levels. Procalcitonin can be dialyzed, and so levels are dependent upon when patients receive hemodialysis. While there is no formally accepted cutoff value for patients undergoing HD, using a value of greater or equal to 0.5 ng/mL yielded a sensitivity of 97-98% and a specificity of 70-96%.
Hepatitis: PCT, possibly together with CRP, is used to corroborate the MELD score.

Similarity:
Belongs to the calcitonin family.

SWISS:
P01258

Gene ID:
796

Database links:

Entrez Gene: 796 Human

Omim: 114130 Human

SwissProt: P01258 Human

Unigene: 37058 Human